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BALTIMORE, JANUARY 12, 1894.

J. R. ALSING Co. (Incorporated),
Patentees, Manufacturers and Agents for
CRUSHING, GRINDING & PULVERIZING MACHINERY
For all Kinds of Materials.

NEW YORK, January 6.

Editor Manufacturers' Record:

We have again renewed our contract with you to advertise in your valuable paper, and wish to state herewith that we are very much pleased with the returns we get from our advertisement therein, and more than this, we are pleased with the manner in which you co-operate with the advertisers, so they may get their full share of returns for the investment made. Thanking you for past favors, we remain, yours very truly,

J. R. ALSING Co.

In view of the vital interest of the present tariff discussion to the South, the MANUFACTURERS' RECORD has established an office in Washington in the Rapley Building, over the new National Theatre, in charge of Mr. Thos. P. Grasty. The MANUFACTURERS' RECORD extends a hearty invitation to all Southern business men, especially those interested in industrial matters, to make its Washington office their headquarters while in that city.

MR. ROBERT BLEAKIE, a prominent New England democrat, complains in a communication to the Boston Herald that if wool be made free all at once, as proposed in the Wilson bill, there would be an immediate shrinkage of \$120,000,000 to be borne by the manufacturers of and dealers in wool and woolen clothing. This, he declares, would be little short of taking from them their entire working capital and could not fail to be disastrous to the country and to any party which should be the cause of it. Commenting on Mr. Bleakie's communication, the Herald says editorially: "It seems to us that the strongest criticism that is likely to be brought against the Wilson bill is the *deference* that has been shown the New England interests."

Florida as a Possible Sugar Producer.

Several years ago the late Judge Kelley, of Pennsylvania, so long known as "Pig Iron" Kelly, because of his devotion to protection on iron, wrote a series of articles on the South for the MANUFACTURERS' RECORD, one of which presented an exhibit of the capabilities of Florida as a sugar-producing country. Judge Kelley believed that almost as important as protection for the iron of his State was protection for the encouragement of sugar-growing in the South, in order that we might build up a sugar industry that, while adding vastly to the magnitude of our agricultural interests, would retain at home the many millions of dollars now paid out annually for foreign sugar. Judge Kelley's views as to the sugar-producing capabilities of Florida were in advance of the day, as he believed that that State could easily, with a continuance of a protective tariff, become the greatest sugarmaking region of the world. The results since accomplished at the St. Cloud plantation, near Kissimmee, have demonstrated the correctness of his predictions. When Mr. Hamilton Disston undertook to reclaim several million acres of land in that section his own friends doubtless thought that it was a wild and visionary scheme, but it is now seen that it was one of the most broad-minded business undertakings of this day of great enterprises. After the work of reclamation had commenced, he started a sugar plantation to prove what could be done in cane-raising, then built a costly sugar mill, and now, after several years of full trial, has proved what the possibilities of that section are. Mr. S. A. Jones, of Tampa, in a letter to the Tampa Times setting forth the results accomplished by Mr. Disston, gives some facts that are worthy of national consideration. There are in Florida, he says, by careful surveys, 4,000,000 acres of the "richest sugar land on the face of the earth, capable of producing 4000 to 6000 pounds of sugar per acre." This land can be reclaimed for \$20,000,000, and with the maintenance of the bounty on sugar, or a tariff of two cents a pound guaranteed for fifteen years, private capital will undertake to reclaim this entire area. If sugar is put on the free list and the bounty system abolished, Mr. Jones thinks that as a national undertaking the government ought to appropriate \$20,000,000 to reclaim this land in order to bring about the great wealth from sugar production which would follow. Mr. Jones, basing his figures on the equipment and the results of the St. Cloud plantation of 1000 acres, now turning out 60,000 pounds of sugar a day, and inviting the most careful investigation of the correctness of his statement, says:

A 5000-acre plantation would require one sugar

mill complete (\$200,000), thirty miles of movable narrow-gage railroad, five dummy engines, 200 cane cars, 175 carts, 600 weeding hoes, 600 cane knives, 350 mules, 600 common laborers and seventy-five expert laborers. Florida has 4,000,000 acres of the finest sugar land in the world that can be made ready for cultivation for \$10,000,000. Counting 5000 acres to the plantation, we find that Florida will furnish 800 such plantations, which would employ 480,000 common laborers and 60,000 skilled or expert workmen, and would require 800 sugar mills at \$200,000 each, making an aggregate of \$160,000,000, and the machinery for them would be manufactured at home. The 800 plantations would require 280,000 head of mules and the produce to feed them, 140,000 carts for our home wagon-makers to manufacture, 200,000 plows and sets of plow harness, 480,000 weeding hoes, 480,000 cane knives, 24,000 miles of movable narrow-gage railroad, 4000 dummy engines, 150,000 cane cars. The average cost today to the American consumer of sugar is six cents per pound. The equipment for the production and manufacturing of 90 per cent. of the American consumption of sugar and the land on which it is grown is owned in foreign countries. Florida can produce the entire American consumption at three cents per pound and make a fine profit after her lands are reclaimed, and employ this vast army of working people and create the demand for this enormous amount of machinery and farm implements.

A Satisfactory Reason.

The Wall Street Journal gives this reason for the decrease in earnings of several railroads:

Formerly the Southern farmer obtained his supplies almost entirely from the Northwest. Then the bad times in the South came along and the Southern farmer had no credit and had to start in to raise his own supplies. At the same time he began economizing and putting his affairs into shape. But now, when he has a little money on hand, he is not sending to the Northwest for his supplies, but continues raising them at home. The railroads have lost a good deal of traffic from this source that they will not get back again.

This, however, means a more prosperous country and a better financial condition of Southern farmers, which will eventually add far more to the business of the railroads than has been lost by the production at home of food supplies.

How Norfolk is Developing.

The Norfolk Virginian has published some interesting statistics showing the commercial development of the city. In round numbers its trade for 1893 amounted to \$82,000,000, compared with \$48,000,000 in 1884, an increase of \$34,000,000 in nine years. The exports for 1893 amounted to \$19,696,556, a gain of \$2,314,556 over the previous year. A total of 457,040 bales of cotton were received, against 345,709 in 1892, an increase of 32¼ per cent. The 1893 coal shipments were 1,774,040 tons, valued at \$5,322,120. The clearing-house receipts were \$49,000,000, \$1,620,000 less than in 1892.

THE fact that I have reported a bill carrying 40 per cent. protection to mill owners—\$4.00 on \$10.00 worth of goods—shows a very tender consideration for the interests of the mill owners.—Hon. Wm. L. Wilson in Boston Wool Reporter.

If protection is robbery, as Mr. Wilson has claimed, why so tender consideration for the woolen mills, but none for lumber, coal and iron people of the South? Let's have protection for all or protection for none.

Rapid Growth of Cotton Manufacturing South.

A few weeks ago the MANUFACTURERS' RECORD, in reviewing the South's possibilities in cotton manufacturing, pointed out that although the South produces over 60 per cent. of the world's annual cotton crop, it has only 2,500,000 spindles out of a total of 85,000,000 in the world. The field for expansion is practically without limit, and the wealth which the development of this industry is destined to create in the South can be estimated in part only by the statement that it would require an investment of nearly \$1,500,000,000 to manufacture in the South all the cotton produced there. This industry is rapidly extending, and every week sees some new mill company organized or the enlargement of some existing plant. Through the severe depression of the past year Southern mills ran steadily, turning out their full product and finding a market for it at a profit, as shown by the dividends now being declared. At present there is considerable activity in the enlargement of mills now in operation. Reports to the MANUFACTURERS' RECORD for the past week show: A Newberry, S. C., mill will increase its capital from \$250,000 to \$400,000 and put in 15,000 new spindles; a mill at Chester, in the same State, will add 5000 spindles, thus doubling its capacity; an Anniston, Ala., mill will spend \$50,000 in enlarging its plant; a large mill at Huntsville, which has proved very profitable, has started on double turn and will run night and day to keep up with its orders; a Gaffney City, S. C., mill has run twenty-two hours a day for fourteen months and is now preparing to increase its capacity. At Augusta, Ga., leading cotton manufacturers have formed a new company with a minimum capital of \$300,000 and maximum of \$1,000,000 to build a 15,000-spindle mill in South Carolina. Many illustrations of this character could be given to show how rapidly the South is pushing its cotton-manufacturing business, even during these times. What will it do with a return of better times?

THE consumption of iron and steel is a test of the material progress of any country, and all the other countries of the world put together have not kept up to the progress of the United States in the development of these great industries in the last few years. The whole world's production of pig iron in 1878 was but little over 14,000,000 tons. The United States alone produced in 1892 over 9,000,000 tons. In 1878 our entire product was a little over 2,000,000 tons; our entire product in recent years reached 10,000,000 tons.—Hon. Wm. L. Wilson in his speech in favor of the Wilson bill.

Mr. Wilson, the MANUFACTURERS' RECORD would like to ask you a question. If our country has made such marvellous progress in iron production, exceeding that of all the balance of the world combined, even including free-trade England, under our present sys-

tem, why do you want to make any experiment by changing to an untried system? Why give up a system that has produced such amazing results, unequalled in the world's history? Mr. Wilson, why do it?

Extracts from Chairman Wilson's Speech.

The tariff of 1890 represented not only a high and liberal protection, but it represented all that greed and selfishness and rapacity dared demand of the American people.

Referring to a proposed meeting to protest against free wool, Mr. Wilson said:

The English landlords, who, when famine was slaying its tens of thousands in Ireland, made a protest against relieving food from taxation, are the prototypes of the gentlemen who will meet in New York the day after tomorrow.

Of all the denunciations of the business men of America who dare to oppose the Wilson bill, the above are the worst that we have ever seen. These words ought forever to doom any man who could utter them to a permanent retirement to private life. The MANUFACTURERS' RECORD believes that Mr. Wilson has done his cause and his party more harm than he will ever do them good. Are the manufacturers of America, be they republicans or democrats, or the men who are not manufacturers, but who honestly believe that a protective tariff is essential to national prosperity—men like Governor MacCorkle, M. Erskine Miller, Major Jed Hotchkiss, John H. Inman, Col. A. S. Colyar, Thomas Seddon and thousands of other Southerners of equal prominence who are fighting for the industrial life of the South—to be described as guilty of "greed, selfishness and rapacity," and as willing to see a continuance of the wail of sorrow and suffering throughout the land, simply because they differ from Mr. Wilson? Party demands can no more give justification for such language than they can for the bitter denunciations of the South that many South-haters have at times been guilty of. Mr. Wilson, you have blundered.

A Sample of the Arguments for Free Ore and Coal.

Mr. E. S. Hutter, of Lynchburg, in an interview favoring free iron ore, said:

Mr. Trout, of Roanoke, in a recently-published interview, says that foreign ores coming to this country "as ballast and at no freight expense" would soon close up our Virginia mines. I wish to state that in the history of this country not one ton of foreign ore has ever come here as ballast. Ores are not produced where ballast is needed, but are transported on vessels specially constructed for that trade.

The MANUFACTURERS' RECORD denies the correctness of Mr. Hutter's statements. Many English steamers chartered to load grain in this country have taken Mediterranean ore if not as ballast at a rate simply enough to cover the cost of loading and unloading. The rate of freight on ore, from almost nothing to a fair price, depends largely upon the demand for steamers to load grain and cotton at Atlantic ports. Ore is not brought in vessels specially constructed for that trade; in fact, every ocean tramp steamer, every steamer that carries cotton or grain, brings iron ore this way when it can secure a cargo. There are two or three steamers that run regularly between Baltimore and Cuba in the ore trade, and while they were built for the company engaged in

this business, they are simply ordinary ocean steamers, and when the ore trade is dull are chartered for grain shipments to Europe. If the rest of Mr. Hutter's statements have no more foundation than these, they are only in keeping with many of the statements of the friends of the Wilson bill in its present shape.

THE picture of New England, with its snug homes and thrifty inhabitants, is rather preferable to that of "hospitable" Virginia, with its "busted booms" and sadly impoverished people. Don't get a wrong impression; the people are most companionable and the lands in some parts fertile, but the money and the energy and the thrift needed for success are lacking. New Englanders have not the gambling instinct strongly enough to impoverish themselves by such schemes as a "boom."—Frederick Deacon in Boston Traveller.

The MANUFACTURERS' RECORD does not know who Mr. Frederick Deacon may be, but it does know that he has displayed such an amount of ignorance as to prove that he is wholly unacquainted with New England people. Investigation will prove that a majority of the "boom" schemes of a few years ago were engineered by New England people, and that in many places New England people were the principal lot buyers. Cardiff, with its \$1,000,000 sales of lots in three days, was wholly a New England scheme engineered by a Boston banking-house. Ten train-loads of New Englanders attended the sale, and nearly all of the property was bought by them. One hard-headed old New Englander paid \$280 a foot, or \$7000 for a corner lot at the sale, when a frame depot was the only house in sight. At Fort Payne and Tallapoosa, when Southern people were ridiculing the pretensions of these places, New England was pouring hundreds of thousands of dollars into them for lots and stock; both were managed by New England men. The fact is, sharp New England "boomers" took advantage of the conditions prevailing to draw a good many millions of dollars out of the small investors in their section into their own pockets via Southern town-lots and fictitious watered stocks, to the discredit of the South and to the disadvantage of the investors. There were many "boom" schemes started honestly and in good faith and some dishonest ones, but the most dismal failures of any were the ones projected and managed by New England speculators.

THE MANUFACTURERS' RECORD is informed that the Howard & Bullough American Machine Co., Limited, which was reported a few weeks ago as having been organized in England with a capital of \$600,000 to build works in this country to manufacture textile machinery, will not do anything until the tariff is settled. If the Wilson bill is passed in its present shape this company will abandon its idea of building works in this country and continue to import English machinery.

Mr. JAMES S. SIMMONS, one of the leading business men of Roanoke, in a letter to the MANUFACTURERS' RECORD, says: "The people of Roanoke, irrespective of politics, are all opposed to the 'Wilson bill' so far as it affects coal and iron, and the course of the MANUFACTURERS' RECORD is highly indorsed and greatly appreciated. If the 'Wilson bill' as presented becomes a law, I think it will be the last of the democratic party."

THE SOUTH'S FINANCIAL SOLIDITY

The Soundness of Southern Business Shown by a Review of the Country's Financial Troubles of 1893—Figures that Tell a Surprising Story.

The MANUFACTURERS' RECORD with this issue presents its readers some figures which form a most convincing argument that the South as a section is not only on a substantial financial foundation, but that it is in better condition today than many other sections of the country.

It is really surprising as one analyzes reports of business conditions to note what a creditable showing is made by the cities and towns south of Mason and Dixon's line. Past reverses have created such an impression, especially among those who are not brought into close association with the South, that it has become too much the fashion to cry down everything pertaining to Southern enterprise as unprofitable and a bad venture. In short, the evil has been magnified and the good unnoticed.

Several months ago, when the MANUFACTURERS' RECORD published a table showing that during the "bankers' panic" the number of suspended banks from Maryland to Texas was much smaller proportionately than elsewhere in the country, it was received with surprise, but "figures don't lie," and the figures were compiled from the best sources. Another review of banking conditions published at the close of the stringency period showed that the South was again in the first rank as to the small number of bank failures and the amount involved.

But one of the best tests of Southern conditions is the exhibit made of business prosperity. During the year 1893 the following number of failures are recorded by Bradstreet's in these States, with the assets and liabilities:

States.	Failures.	Assets.	Liabilities.	Population 1890.
Maryland...	116	\$818,500	\$1,334,986	1,043,380
Virginia...	268	1,640,991	2,435,541	1,655,980
N. Carolina...	62	338,866	732,334	792,794
S. Carolina...	119	1,993,050	2,351,253	1,617,047
Georgia...	83	482,594	1,122,966	1,151,149
Florida...	239	2,674,944	4,113,567	1,837,353
Alabama...	67	648,023	1,038,680	391,432
Mississippi...	118	1,075,694	1,667,768	1,513,017
Louisiana...	126	807,550	1,367,768	1,209,600
Tennessee...	56	559,016	1,094,268	1,118,587
Arkansas...	690	7,993,099	10,531,253	2,238,527
Dist. of Col.	274	5,052,064	7,219,402	1,707,518
Totals....	2419	\$24,780,822	\$38,478,231	17,742,581

In 1892 the number was 1915, with assets of \$10,929,161 and liabilities \$18,167,690. Florida had one less failure in 1893, Alabama eleven less, Mississippi thirty-eight less and Louisiana twenty less than in 1892. This is a record not shown by any other States except Oregon and Washington, but the decrease in number, six in Oregon and two in Washington, was offset by the larger sums involved, the liabilities of insolvent concerns in each Pacific State being over \$100,000 greater in 1893 than in 1892. In Mississippi the aggregate liabilities were \$701,382 less in 1893 than in 1892, and in South Carolina \$70,548 less, the only States in the Union showing a decrease over 1892, despite the fact that during 1893 the largest number of failures occurred in the history of this country.

Comparing the totals of failures, assets and liabilities in the South with other sections of the country, we have the following:

	Failures.	Assets.	Liabilities.	Population.
Southern (thirteen States and District of Columbia).	2419	\$24,780,822	\$38,478,231	17,742,581
Eastern (six States)....	2139	23,867,874	45,465,110	4,700,745
Middle (four States)....	3415	74,119,915	124,381,173	12,869,313
Western (eight States)....	4371	81,663,224	109,485,547	18,082,073
Northwestern (seven States)....	1630	42,626,370	62,375,448	6,329,695
Pacific (five States)....	1202	13,505,493	18,268,459	2,001,433
Territories (six)....	384	2,511,953	3,973,850	865,982
New York city....	815	35,439,412	58,599,328	1,513,501

Here are figures which are truly remarkable. In the six New England States, with a population of 5,000,000, in round numbers, the liabilities of insolvent concerns amounted to \$7,000,000 more than those of the thirteen Southern States, with a population more than three times as great. Of course, the argument can be made that the amount of capital invested in New England business enterprises is much greater in proportion than the relative populations, but few will admit that this difference in capital makes up for the difference in the number and importance of failures. The total number of these was only 300 less in New England than in the entire South, showing plainly that the large manufacturing and mercantile companies did not furnish all the liabilities by any means, but that the disasters were generally distributed from Maine to Connecticut.

Coming to the Middle States (New York, New Jersey, Delaware and Pennsylvania), we find that though their population is 5,000,000 less than the Southern group, their liabilities were over three times those of the former, and the number of failures 3415, or nearly double the others. The same argument can be used here as in the comparison with New England—that far more capital is placed in different enterprises—but still it is questionable if this makes an equitable proportion when compared with the amount of assets and liabilities.

The comparisons of the Southern, Western and Northwestern groups are perhaps the most important, however. The West and Northwest are more nearly agricultural localities than the Middle and Eastern States, and the conditions are more similar to those in the South. Like the latter, their commercial activity is of comparative recent date, and there are few old-established firms, of which one finds so many nearer the seaboard. The people are scattered over a larger area, and not massed so much in the cities as in the section extending from Lakes Erie and Ontario to the Atlantic. Taking the Western group first, which comprises Ohio, Indiana, Illinois, Missouri, Michigan, Kansas, Kentucky and Colorado, we have a total of 4371 failures to a population of 18,082,073 about 300,000 more than the population of the Southern group. These failures aggregated the enormous sum of \$109,485,547, about \$28,500,000 in excess of assets, compared to about \$14,000,000 excess in the South out of a total of \$38,478,231 liabilities. Leaving out Kentucky, which is usually termed a Southern State, deducts 274 failures with \$5,013,932 in liabilities, but this is not enough to affect the significance of the sectional figures given. In the Northwestern group, which comprises Wisconsin, Minnesota, Iowa, Nebraska, North Dakota, Montana and Wyoming, are to be found more new mercantile enterprises than perhaps any other part of the country except the South. These States have 6,329,095 inhabitants, a little more than one-third of the Southern population, with very few large concerns compared with the East, yet there were 1630 cases of insolvency, but 789 less than in the South, which amounted to liabilities of over \$62,000,000—\$20,000,000 in excess of assets and \$17,000,000 more liabilities than in the South.

The following table will give an idea of the relative proportion of failures in the South to other sections, estimated on the amount of liabilities alone, irrespective of

population or amount of assets, and calculating the South on the basis of one:

Southern 1.	
Eastern 11-6.	
New York city 110-19.	
Northwestern 112-19.	
Western 217-19.	
Middle 35-19.	

In other words, estimating the population of the South equal to that of the other groups (although in but one case, the Western States, it is smaller), we find the debts of insolvent firms to be one-sixth greater in New England, ten-nineteenths greater in New York city alone, twelve-nineteenths greater in the Northwest, one and seventeen-nineteenths greater in the West, and two and five-nineteenths greater in the Middle group. The population of the Pacific States and Territories is so small that it is obvious no comparison can be made without calculating on the number of people and assets as well.

One or two comparisons by separate States will further bear out the assertion that the South is in as good condition today, financially, as any other part of the country. Alabama has a population of 1,513,017. It is a State which is the centre of important mining operations, and which includes some of the largest manufacturing plants in the country in its boundaries, with the laboring people dependent on them and the business firms, which, in turn, depend on the laboring people largely for trade. The general depression probably affected Alabama as much, if not more than any other Southern State in stopping industries and shutting off the revenue from their operation. Kansas has 1,427,096 population, slightly less than Alabama, and New Jersey 1,444,953, while Wisconsin has 1,680,880 people. New Jersey is more like Alabama—an extensive manufacturing section, Kansas is an agricultural State and Wisconsin an agricultural and lumbering region. During 1893 Alabama had 118 business reverses, with assets of \$1,100,000, in round numbers, and liabilities of \$500,000 more than that sum; New Jersey had 188 failures, with \$1,537,694 assets, and liabilities \$1,400,000 in excess; Kansas had 878 failures, with \$5,797,500 assets, and liabilities \$1,250,000 more; Wisconsin had 280 failures, with \$18,949,000 assets, and liabilities \$6,000,000 more.

It should not be difficult to tell, with such figures, which is the most prosperous State of the four.

In connection with this article, a short review of bank clearings in the South for the year 1893 will be of interest. The figures which make up these clearings form an additional proof of the statement that this section is doing business on a more substantial basis than ever before. For purposes of comparison we append a table of the clearings for eight years from the clearing-house cities of the Southern, New England and Western States. The figures are compiled by the Commercial and Financial Chronicle:

Year.	Southern.	N. England.	Western.
1893....	\$2,856,002,000	\$5,314,192,000	\$6,633,068,000
1892....	3,117,048,000	5,751,490,000	7,387,082,000
1891....	2,852,071,000	5,459,491,000	6,446,492,000
1890....	2,768,251,000	5,819,111,000	6,644,213,000
1889....	2,279,216,000	5,430,390,000	4,988,162,000
1888....	2,005,401,000	5,020,946,000	4,614,485,000
1887....	1,889,909,000	4,967,821,000	4,413,940,000
1886....	1,697,424,000	4,636,470,000	3,930,909,000

The decrease in the South was but \$261,000,000 compared with 1892, while compared with 1891 there was an increase of \$4,000,000, and compared with 1886 there is an increase of \$1,158,578,000, or about 45 per cent., showing how fast business is developing in the South. Making the same comparisons in the other two sections, we find that in New England the clearings in 1893 were \$437,298,000 less than in 1892, over \$145,000,000 less than in 1891 and \$505,000,000 less than in 1890. The increase of 1893 over 1886 is but \$683,722,000. In the West the clearings were \$754,014,000 less in 1893 than in 1892, but

nearly \$200,000,000 greater than in 1891, while the increase of the past year over 1886 is nearly 100 per cent., showing what a vast amount of capital has been attracted to that part of the country for investment in the last eight years. The Western group of clearing-houses includes Indiana, Illinois, Michigan, Ohio and Wisconsin.

Taking the clearing-house cities as a whole, twelve show an increase in 1893 over the previous year. Among them are Galveston, Houston, Waco, Savannah and Dallas, out of sixty-five cities all told.

Atlanta's International Exposition.

[Special Cor. MANUFACTURERS' RECORD.]

ATLANTA, January 8.

The committee adopted as a name for the Atlanta Fair, "The Cotton States and International Exposition." A charter will be immediately obtained, the capital stock to be \$1,000,000, with privilege of raising to \$5,000,000.

The city is alive about the exposition. Mr. Clark Howell stated to the committee at its first session that some time ago Dr. J. B. S. Holmes, of Rome, had bought an Atlanta lot on which to build a sanitarium and had suspended his movement, but when he saw that the exposition movement was started, he immediately let out a \$30,000 contract for a building. It was determined to open the exposition Monday, September 2, 1895, and close November 30, 1895, running three months.

Mr. Amorous called attention to the fact that now the city had what it did not have in 1881, when the Cotton Exposition was so successful, viz, paved streets, a fine water system, splendid water and police departments, complete electric-car lines everywhere, besides being widely advertised.

The Piedmont exposition grounds were selected as the place for the affair, if satisfactory transportation arrangements were made. These grounds have 200 acres, with only seventy-five in use, leaving ample ground for extensions. Three electric-car lines and one railroad line go to the Piedmont Park, with its fine buildings, and the approaches to it are through the finest part of the city, with the handsomest residences, and by the magnificent Peachtree thoroughfare, paved with asphalt, the choice drive of the place.

Three gentlemen were unable to serve, Messrs. Elsas, Stahlman and Kingsbery, and in their places were chosen B. F. Walker, Hugh Inman and Capt. W. G. Raoul, president of the Mexican National Railroad. Ex-Mayor Wm. A. Hemphill was elected permanent president of the exposition, and Capt. Robt. J. Lowry, bank president, the treasurer.

The exposition has been endorsed all over the South. Texas, Louisiana, North Carolina, Mississippi, Tennessee, South Carolina, Virginia, Alabama and Florida have sent messages of approval and promises of co-operation, while every city of Georgia has united in warm sanction and encouragement of the project.

The government authorities in Washington are taking a deep interest in the matter. Mexican Minister Romero has promised to press an exhibit from Mexico. Secretary Hoke Smith and the Georgia senators and congressmen are all working for the exposition.

The committee will first raise the preliminary \$200,000 and organize a complete plan for the affair on the largest scale, laying a deep and broad foundation for a vast superstructure. I. W. AVERY.

COAL-WASHING has proved to be such a success in the South that there is a disposition to extend the industry, and it is reported that the Sloss Iron & Steel Co., of Birmingham, is arranging to put up three washers at different mines. This company is said to be well supplied with orders, having contracts on hand for several months' deliveries.

MR. JOHN H. INMAN'S VIEWS.

How the Wilson Bill as it Stands Would Injure the South, and How the South Can Be Made to Prosper as Never Before.

MR. INMAN'S WARNING TO SOUTHERN DEMOCRATS.

WASHINGTON BUREAU,
MANUFACTURERS' RECORD,
ROOM "E," RIPLEY BUILDING,
January 9.

There is to be found among the members of the Southern colony in New York city a livelier interest in the South's material prosperity and a clearer comprehension of what is necessary for Southern development than among an equal number of business men in any Southern city. The broadening of view resultant from metropolitan attrition has tended to bring about a more vivid realization of the potentiality of Southern resources in maintaining the general prosperity of the entire country. From this vantage ground it is easier to see what Southern products have done to avert national calamity, and what the utilization of the South's undeveloped wealth may do to increase the welfare of all our people from ocean to ocean.

For instance, every Southerner in business in New York knows what cotton has done to keep the balance of trade on the right side, and what Southern furnaces have done to lighten the burdens of all who dwell within the Union.

It was to talk about things of this kind, and the unfairness of free ore, free coal, and iron with the duty reduced to 22½ per cent. ad valorem, that I went yesterday to New York.

Foremost among Southern men in New York business and financial circles is John H. Inman. As everybody knows this, what he has said to me, with leave to print in the MANUFACTURERS' RECORD, will probably go far toward awakening the business element at the South to the importance of carefully considering the effect of certain pernicious features of the pending tariff bill upon Southern interests. Strictly a business man though he is, Mr. Inman is, and has ever been, an earnest democrat and an unswerving advocate of tariff reform, though he is not one of those democrats who stubbornly shut their eyes to the defects of the Wilson bill. He would never have succeeded in business in New York had he been a believer in any sort of human infallibility. Busy man that he is, he took the time to answer fully every question I had to ask on this matter of momentous import to the South, prefacing my type-written queries with a few timely remarks about the South as a source of national wealth—which no one is better qualified to give an opinion upon than he—and adding at the close a prediction that will be of interest to the public throughout the commercial world.

INTERVIEW WITH JOHN H. INMAN.

"The South," said Mr. Inman, "is without doubt the most promising source of national wealth, and not only is it to the interest of the people of the South, but it will prove to be 'the greatest good to the greatest number' throughout the Union, that nothing be done by Congress to check the development of Southern resources. Mr. Wilson admits that consideration has been shown to certain manufacturing interests in framing his bill; in other words, that there are some whom it is intended to protect. If there is to be any protection, the South deserves it rather than New England."

Having thus in forceful but conservative terms condemned the injustice to the South proposed in the Wilson bill, he proceeded to answer one by one the following questions:

1. If British pig can be laid down along-side Atlantic ports at \$10.80 with the tariff reduced to 22½ per cent. ad valorem, as

proposed by the Wilson bill, what, in your judgment, would be the effect upon Southern furnaces?

"It would be," he answered, "to close all Southern furnaces except a few having peculiar special advantages, and even those could not make any money. In order to avoid actual loss, furnaces would have to own their ore beds, their limestone, their coal mines and their coke ovens, all very closely grouped. Such furnaces as would have to go outside to buy these would have to go out of blast. The great mineral region of Alabama," he continued, "would be thrown into deep distress by reason of the closing of many furnaces, while surviving furnaces would have to work on such pinching lines as to affect seriously surrounding localities."

I here handed him a statement of the situation from the standpoint of the Virginia ironmasters, written by Mr. M. Erskine Miller, and asked:

2. Would it be as bad as that in Alabama?

"While Alabama," he replied, "can make iron cheaper than Virginia, yet in many cases the haul to market is longer, and the general effect would be about the same in both States."

3. In view of the heavy grain traffic east-bound, would not the trunk lines from New York to the West and Northwest be in a position to place British pig in those markets, now supplied largely by Alabama, at a rate which cannot be met by lines out of Alabama and Tennessee?

"There is no doubt but that much British iron, if laid down at north Atlantic ports around \$10.00, will be taken into the South's iron markets at rates which may cause damaging competition. New Orleans, however, being a port to which so many ocean vessels come in ballast, will be the port through which British pig will do its worst to Southern interests, for from New Orleans water transportation will be available to nearly the entire territory now supplied by Alabama and Tennessee."

4. What of the claim which free-traders are making, that free ore will result in the erection of great steel as well as iron furnaces along the south Atlantic, and thus benefit the South?

"This question," said Mr. Inman, "is fully answered by Governor Russell in his argument for free coal and free iron ore for New England, which appeared in the December North American Review. Instead of great furnaces on the south Atlantic coast, free ore and free coal would result in great furnaces along the coast of New England, where there is so much more capital and skilled labor than in the South. Moreover, New England, by reason of her vast capital and ownership in railroads, will be enabled, through free ore and coal, not only to make the iron and the steel, but to fix freight rates, so as to keep down for a long time further Southern development."

5. As a man who ought to know something of the transportation problem, do you think free coal can possibly benefit any considerable number of Southern consumers?

"It is highly problematical whether free coal would benefit the people of even a single Southern seaport; but, on the other hand, it would prove a tax on many thousands of Southern consumers at inland points. Take away the through traffic of a railroad, and it is inevitable that the loss will, as far as possible, be recouped by the raising of local freight rates. The people in towns between the mines and the seaboard, along lines of rail having long hauls of either coal or iron, ought, from a stand-

point of self-protection, be the most vigorous resisters of either free coal or free ore, or the cutting to 22½ per cent. ad valorem of the duty on pig iron."

6. Would there be any considerable compensating results to the South within this generation from either free ore, free coal, 22½ per cent. pig or free lumber?

"None that I can see."

7. What has caused the cheap iron which all the people are now getting benefits from?

"Leaving out the effects of the recent general depression, the people of the Union owe the benefits they are now enjoying from low-priced iron to Southern development. It was the opening up of the iron and coal deposits of the Virginias, Alabama and Tennessee which made cheap iron possible. A natural and healthy competition between the South and the North resulted in the price being set by the region where coal, ore and limestone were in closest proximity and mined most inexpensively. And, while many Northern furnaces were forced by this competition to shut down, nevertheless, the millions got the benefit of lower-priced iron than was considered possible a dozen years ago. And though the field of production was changed, the wealth of the nation was increased."

8. Do you think the business men of the South, after once feeling the general depression which the Wilson bill, if enacted without satisfactory amendments, will produce, would renounce their democracy if they could not otherwise get relief?

To the foregoing question Mr. Inman made deliberate answer in these words: "Yes. They would."

9. Then, would it not be the wiser course for Southern democratic representatives and senators to avoid the possibility of any such result by demanding amendments in consonance with the business requirements of the South?

"In my opinion," he replied, "with less than a dozen changes in the pending bill the democratic Congress could, in a few weeks, redeem the pledges of the party and start revolving again the wheels of national prosperity. Among the changes necessary to accomplish this, I would suggest in addition to retaining the seventy-five cents a ton on ore and coal, that the duty on pig iron be reduced to, say, 40 per cent. ad valorem, and that a tariff for revenue, of from one to two cents, be placed on sugar. The business men of the South will serve their country as well as their party by closely scrutinizing the pending measure and voicing their conclusions. They should protest against any unfair or undemocratic features, and, in my opinion, democratic statesmen who shall insist on such amendments to the Wilson bill as are required on sound business principles, though they may for a little while be criticised by the unthinking, will in the end be upheld by the people."

Having answered my questions, he took occasion to say with much emphasis that with the Wilson bill as reported properly amended he had unbounded confidence in the speedy restoration of prosperity, and that the South would be the first to recover. He declared it to be his belief that, with her industries uncrippled by the unwise features of the bill heretofore pointed out, the South would soon enter a period of more substantial progress and prosperity than has ever heretofore occurred. This bright outlook was due, he thought, to two causes: First, the fact that the South had the start on the rest of the country by several years in the process of liquidation and had now reached the highest state of self-helpfulness in her history; and, second, the opportunities offered by Southern resources for the investment of capital will be seized all the quicker on account of the long stagnation. Nowhere else is there so much worth developing, nowhere else the risks so slight, nowhere else the probability of large returns so great.

THOMAS P. GRASTY.

Some Statistics of Coal-Mining in the South.

By Baird Halberstadt, Pottsville, Pa.

Apropos of the Wilson bill, now pending in Congress, and the tendency on the part of many Southern senators and representatives to favor the passage of that measure, the tables given herewith may be of interest not only to the Southern legislators, but to all who have the welfare and prosperity of the South at heart. The present duty of seventy-five cents per ton on bituminous coal and shale has been levied since 1872, and under it the Southern coal mines have increased in number and wonderfully enlarged their annual output, as an examination of the tables given will show.

The Wilson bill, now before Congress, removes this duty, and throws open wide the doors to foreign producers not only in the matter of coal alone, but of iron ore as well.

In 1892 the total production of coal in the United States amounted to 179,329,071 short tons. Of this amount 25,484,036 tons were produced in the Southern States, including Kentucky and Tennessee. In the same year the tonnage of iron ore amounted to 16,296,666 long tons. Nearly 4,000,000 tons came from the South, Alabama alone producing 2,312,071 tons, making this State second in point of production.

The progress made in the coal industry of the country in the past twenty years has been marked, and in no other States has the production increased as rapidly as in the States of the South, and it is to be earnestly hoped that its progress will not be retarded through any pernicious legislation.

Some of the figures presented in the accompanying tables are almost startling, and might be doubted were they obtained from any other source than the several bureaus of the government charged with the collection of these statistics. They are not figures prepared by any tariff league or similar association, but, as has been said, are the figures collected by the several agents of the government. Hence they can be depended upon and are the best obtainable.

In 1870, as will be seen by the table below, the aggregate production of coal in the South amounted to but 3,193,190 tons, a tonnage less than was produced by the State of Maryland alone in 1892. Ten years later (1880) this tonnage had nearly doubled (6,037,003 tons). In 1889 it was nearly three times greater than in 1880, or almost six times greater than in 1870. The last annual tonnage procurable at the present time (that of 1892) shows that this tonnage has increased to 25,484,036 tons, a gain of nearly 800 per cent. over the tonnage of 1870.

A second table shows the number of employes in 1880 and 1889, 1890, 1891 and 1892; the amount of wages paid them in 1880 and 1889, as well as the amount of capital invested in mining operations. A glance at this table will repay the reader, for he will find some interesting figures. Between 1880 and 1889 the number of employes had increased over 200 per cent., and the amount paid in wages had risen from \$4,199,198 in 1880 to \$12,976,618 in 1889, while the amount of invested capital had more than doubled.

The third table gives the annual production of coal for nine years (1884-1892). It will be seen upon examination that, with the exception of the year 1886, the tonnage had steadily increased over that of each preceding year. The greatest increase was that of 1891 over 1890, 4,139,388 tons.

The amount paid in wages to employes in and about the coal mines in the South in 1892 closely approximate \$17,500,000.

With such a showing, is it wise for Southern statesmen to enact any legislation which will in any way retard the wonderful progress

made in one of its most prosperous and stable industries?

It is safe to assume that there are no less than 150,000 persons directly dependent upon the coal industry of the South. Included in this number are only the actual employes and their immediate families. This number, of course, would be largely increased were those indirectly dependent upon it considered.

It is well to bear in mind that there were imported and entered for consumption in the United States in 1872 no less than 485,063 tons of bituminous coal and shale; in 1882 we imported 795,722 tons, and in 1892 the imports amounted to 1,143,304 tons, on all of which was paid a duty of seventy-five cents per ton, which the Wilson bill proposes to remove.

Australia and British Columbia send coal to San Francisco; Great Britain lays down coal at both the Atlantic and Pacific seaports, and Nova Scotia is a regular contributor to the Atlantic coast points. This being so, the question arises, if foreign countries (and we assume that they are operating their mines for profit, and not merely for pleasure,) can send us annually over 1,000,000 tons of bituminous coal, and pay a duty of seventy-five cents per ton upon it, how much more will they send us if this duty be removed?

TABLE (I) GIVING COAL PRODUCTION BY DECADES AND THE PRODUCTION FOR 1892 IN THE SOUTHERN STATES.

States.	Ninth Census. 1869-70. Tons.	Tenth Census. 1879-80. Tons.	Eleventh Census. 1889. Tons.	Annual Product. 1892. Tons.
Alabama.....	11,000	323,972	3,572,983	5,529,312
Arkansas.....		14,778	279,584	535,558
Georgia.....		154,644	225,934	235,498
Kentucky.....	39,939	946,288	2,399,755	3,025,313
Maryland.....	2,345,153	2,228,917	2,937,715	3,419,962
N. Carolina.....		350	192	6,679
Texas.....			128,216	245,690
Tennessee.....	133,418	495,131	1,925,689	2,092,064
Virginia.....	61,803	43,079	865,786	675,205
W. Virginia.....	608,876	1,529,844	6,231,880	9,738,755
Totals.....	3,193,190	6,037,003	18,569,734	25,484,036

TABLE (II) GIVING THE NUMBER OF EMPLOYES IN AND ABOUT THE COAL MINES IN THE SOUTHERN STATES IN 1880, 1889, 1890, 1891 AND 1892, THE AMOUNT OF WAGES PAID IN 1880 AND 1889, AND THE AMOUNT OF CAPITAL INVESTED IN 1880 AND 1889.

Compiled for the MANUFACTURERS' RECORD from census records and reports of the United States Geological Survey by Baird Halberstadt.

States.	Number of Employes.					Amount Wages Paid.		Capital Invested.	
	1880.	1889.	1890.	1891.	1892.	1880.	1889.	1880.	1889.
Alabama.....	1,513	6,864	10,642	9,302	10,075	\$328,788	\$3,157,109	\$772,858	\$12,535,194
Arkansas.....	130	677	938	1,317	1,128	20,850	248,899	15,600	1,289,751
Georgia.....	442	733	425	890	467	85,179	258,016	441,745	724,500
Kentucky.....	2,826	5,144	5,259	6,355	6,724	687,474	1,669,524	1,968,537	6,581,380
Maryland.....	3,677	3,702	3,842	3,891	3,886	1,370,079	1,700,305	13,165,557	18,025,367
N. Carolina.....	4		80	90	90	300		40,170	
Texas.....		543	674	787	871		252,470		397,335
Tennessee.....	1,092	4,031	5,082	5,097	4,926	336,765	1,548,392	1,708,968	4,362,711
Virginia.....	261	1,523	1,295	820	836	71,447	604,796	329,000	1,055,516
W. Virginia.....	4,497	9,778	12,236	14,227	14,867	1,298,316	3,537,107	5,750,674	10,508,050
Total.....	14,442	32,995	40,473	42,826	43,870	\$4,199,198	\$12,976,618	\$4,243,109	\$55,389,804

*Included with Georgia. †No enumeration of this industry in Texas in Tenth Census as no commercial mines then existed. NOTE.—The wages paid in 1892 approximate \$17,500,000.

TABLE (III) SHOWING THE PRODUCTION OF COAL IN THE SOUTHERN STATES FOR NINE YEARS (1884 TO 1892) IN TONS OF 2000 POUNDS.

Compiled for the MANUFACTURERS' RECORD from official records of the United States Geological Survey and the Eleventh Census by Baird Halberstadt, Geologist, Pottsville, Pa.

States.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Alabama.....	2,240,000	2,492,000	1,800,000	1,950,000	2,000,000	3,572,983	4,090,409	4,759,781	5,529,312
Arkansas.....	168,000	149,999	125,000	150,000	276,871	279,584	399,888	542,379	535,558
Georgia.....	200,000	150,000	223,000	313,185	180,000	225,934	228,337	171,000	215,498
Kv.....	1,736,000	1,904,000	1,550,000	1,933,185	2,570,000	2,399,755	2,472,119	2,916,066	3,025,313
Md.....	3,287,176	3,209,891	2,517,577	3,278,023	3,479,470	2,939,715	2,899,572	3,820,239	3,419,962
N. C.....						192	10,262	20,355	6,679
Texas.....	112,000	149,999	112,000	75,000	90,000	128,216	184,440	172,100	245,690
Tenn.....	1,344,000	1,000,000	1,714,290	1,900,000	1,907,297	1,925,689	2,169,585	2,413,678	2,092,064
Va.....	336,000	635,040	648,951	825,263	1,073,000	865,786	784,011	738,399	675,205
W. Va.....	3,360,000	3,369,062	4,005,796	4,836,820	5,498,800	6,231,880	7,394,654	9,220,665	9,738,755
Total.....	12,783,176	13,059,991	12,696,614	15,262,006	18,035,438	18,569,734	20,633,777	24,772,665	25,484,036

Total for ten years, including 1883, 171,634,244 tons.
*Estimated. †No figures available.

Effect of Free Coal on the Prices of Fuel in Virginia.

Leading coal consumers of Richmond are opposed to free coal, and have sent out the following:

We, the undersigned, manufacturers and consumers of coal in Richmond, Va., having given attention to the matter, hereby express our belief that the removal of the

duty on foreign coal will not be of benefit to our interests.

We feel sure that foreign coal will not enter this market, and are convinced that its introduction free of duty to certain other sections of the country will not cause lower prices in the supply available to us. (Signed).

OLD DOMINION IRON & NAIL WORKS CO.,

By ARTHUR B. CLARKE, President.

RICHMOND LOCOMOTIVE & MCH. WORKS.

By W. R. TRIGG, President.

THE TREDEGAR COMPANY,

By ARCHER ANDERSON, President.

P. H. MAYO & BROS., INCORPORATED,

Per P. H. MAYO, President.

ATLANTIC & VIRGINIA FERTILIZING CO.,

W. H. URQUHART, Secretary.

SULPHUR MINES CO. OF VIRGINIA,

By S. D. CRENSHAW, Treasurer.

B. COTTELL & SON,

Wholesale and Retail Coal Dealers.

RICHMOND STANDARD SPIKE & IRON CO.,

By BYRD WARWICK, President.

S. P. LATHROP & CO.,

Wholesale and Retail Coal Dealers.

S. H. HAWES & CO.,

Wholesale and Retail Dealers in Coal.

J. R. JOHNSON & CO.,

Iron Manufacturers.

Criticising Mr. Atkinson's Tariff Views

31 BURLING SLIP, NEW YORK, January 9.
Editor *Manufacturers' Record*:

Mr. Edward Atkinson, in your issue of December 15, says that protection has "been detrimental and obstructive to the development of iron production of this country for many years." The iron production of nine Southern States in 1880 was 397,301 tons (2000 pounds); in 1890, 1,953,459 tons (2000 pounds). Virginia produced in 1880, 29,934 tons; in 1890, 327,912 tons. This kind of obstructed development is what we seek. Great Britain unobstructedly developed to such an extent as to increase her production during the ten years men-

tioned to 155,000 tons more in 1890 than in 1880, or about 174,000 tons of 2000 pounds.

He says our labor cost per unit of product is less than in any other country. If so, it is because our workmen are better fed and housed, and can produce more. Lower their wages, and their standard of living is lowered; they will produce less. But Mr. Atkinson, believing that a shill-bone is better for the laborer than roast

beef, may not be expected to look at that side of the question. He is not interested in coal and iron ore, but when he speaks of cotton he may be expected to state facts. He says he will apply the Socratic method to his argument. I have often wondered why the Athenians were so anxious to deprive Socrates of his life, but if Mr. Atkinson's reasoning as to the cargo of the steamer Othello is a fair specimen of Socrates's method, I must, while pitying Socrates, sympathize with the Athenian people. He asks how could the steamer Othello take out 700 bales of cotton to Antwerp if it were not because its cost per pound was less in America than in India, Egypt, etc. As a plain common-sense answer to his questions, I would simply say that the reason the steamer Othello, sailing December 2, took 700 bales of cotton to Antwerp was because some one in Antwerp wanted it. And the reason he wanted it and took American cotton is found in the following figures:

Cotton used on Continent Europe, say...	Bales per annum.
All parts of the world, exclusive of America produce	4,500,000
Leaving, say.....	2,500,000

which must come from America, even if continental Europe took all the cotton raised in Egypt, India, etc., which is not the case. The cost of production, probably, had nothing to do with the shipment of that 700 bales.

Either there is something radically wrong in the Socratic method or in Mr. Atkinson's manner of applying it.

I could not repress a smile as I read a little further on in the same issue an article on peanuts. As long as Mr. Atkinson sticks to peanuts we need not worry, but when he tackles coal and iron ore trouble ensues.

F. A. DALTON.

Canadian Pig Iron in the New England Market.

Owing to the substitution of ad valorem for specific duties, the Wilson bill in its present shape would make Canadian competition particularly effective in our New England markets. Canada pays a bounty of \$2.24 per gross ton on all pig iron made in the Dominion, with an ad valorem duty. Canadian pig-iron manufacturers will deduct this bonus from furnace cost and pay duty on the remainder. It seems that heretofore this point has almost escaped notice. A gentleman connected with the Eastern iron trade informs us that during the past summer he had to meet Scotch irons in Montreal, Quebec, Hamilton and Toronto. At that time the best brands of Scotch pig iron were shipped from Glasgow to Montreal at a cost of only thirty-six cents per ton freight. The duty was \$4.48, which, with the freight added, put Scotch iron f. o. b. in Montreal at \$4.84. The selling price at Montreal was \$17.50, which, less \$4.48, made the selling price at Glasgow about \$12.00.

Under a tariff law such as is proposed Nova Scotia iron manufacturers will look to New England for their salvation. With cheap water freights they can afford to give up the Montreal and Western market in exchange for one nearer home. The American Manufacturer is informed that there is a point near St. John, N. B., where Bay of Fundy ores yielding 52 to 55 per cent. and washed-coal coke from Cumberland basin will make an iron costing not more than \$10.00 at the furnace. Taking from this \$2.24 bonus, and, with low water freights not over seventy-five cents per ton at the highest to Boston, it will be seen that this iron would have a sweep in the New England market.—American Manufacturer, Pittsburg, Pa.

THE citizens of Buena Vista, Va., are preparing plans to induce outside manufacturers to locate plants in that town. A meeting has been held advocating this idea.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 390.]

Georgia Central Finances.

Messrs. Wilson, Colston & Co., of Baltimore, have completed another analysis of the financial condition of the Georgia Central, and have furnished the MANUFACTURERS' RECORD their latest figures, showing the basis on which the system can be reorganized. Receiver Comer, so they state, calculates that for the year ending July 1, 1894, the roads will earn \$2,000,000 above operating expenses. This is estimated from the present net earnings. The principal securities are about \$5,000,000 in first mortgage bonds at 7 per cent., \$4,880,000 collateral 5s, \$1,000,000 in Ocean Steamship Co. 5s, \$1,500,000 Montgomery & Eufrasia 6s, \$7,755,000 Savannah & Western 5s, \$5,191,100 Southwestern 7 per cent. stock, \$4,600,000 certificate 6s, \$2,090,000 C. R. & C. Railway 5s. In the reorganization plan the bankers believe that the interest could be reduced to 5 per cent. at least on all but the collateral trust and steamship bonds, on which the interest is but \$294,000. Scaling the interest, they calculate, would easily bring the interest charges to less than the \$2,000,000 which the roads can earn.

The Central is receiving a great deal of attention since the improvement in its earnings has been noted, and it would not be surprising if a practical scheme of reorganization were submitted to its security holders in a few weeks.

Justice Jackson has decreed the sale of the Central within sixty days after July 1 under the tripartite mortgage. The Southwestern road is also to be sold, but separately from the former, unless some refunding plan is adopted before that time, of which the bondholders approve.

To the Gulf Shore.

Captain William Davis, who is at the head of the movement to build the San Antonio & Gulf Shore Railway, writes to the MANUFACTURERS' RECORD from San Antonio as follows:

"The San Antonio & Gulf Shore will run to Galveston and will be fifty miles shorter than any of the present lines, running through one of the best agricultural sections in the State and forming the only continuous line to both Velasco and Galveston."

He adds that it has no connection with any other line and that the Santa Fe system is not interested in it. Mr. Davis is now going over the route with Missouri railroad contractors. The company has already been pledged several hundred thousand dollars in bonuses, Matagorda county citizens alone contributing about \$80,000. The road will be bonded for \$12,000 per mile and contractors are negotiating as to the commencement of the actual construction work. The first work will probably be done on the San Antonio end and the contract will be let for the first thirty miles.

A Reported Sale.

A dispatch from Raleigh, N. C., reports that the Cape Fear & Yadkin Valley Railroad is to pass into the hands of a European syndicate, which has contracted to purchase the interest of the North State Improvement Co., operating it, for \$1,000,000. This includes a lease interest in the South Carolina Pacific road and stock in the North Carolina Steel & Iron Co. The Cape Fear & Yadkin Valley consists of the main line from Wilmington to Mount Airy, 248 miles; Fayetteville branch, from South Carolina State line to Fayetteville, N. C., forty-six and three-quarter miles; Ramseurs branch, from Factory Junction, N. C., to Ramseurs, N. C., eighteen and three-quarter miles; Madi-

son branch, from Stokesdale, N. C., to Madison, N. C., eleven and a-half miles; Granite branch, from Mount Airy to Granite, two miles, and Furnace branch to the North Carolina Steel & Iron Co.'s furnace, one mile.

The New Arkansas Road.

Over \$40,000 of the \$75,000 bonus required to secure the building of the railroad from Little Rock to Hot Springs, Ark., has been pledged, and it is hoped to obtain the total amount within a few weeks.

In connection with this enterprise there are grounds for believing that the new road, as well as the Little Rock & Memphis system, will enter the former city over the bridge which the Little Rock Bridge & Terminal Railroad Co. proposes to build across the Arkansas river. It was stated in the MANUFACTURERS' RECORD several weeks ago that the Little Rock, Hot Springs & Texas would be closely related to the Memphis system, and possibly might form an extension to it. Recent developments tend to confirm this statement.

The Headlight of the Future.

Electric headlights for locomotives will probably come into general use within a few years. Indeed, it will not be surprising if some States do not pass a law compelling companies to substitute them for the present means of illumination. Eminent authorities agree that many collisions, involving great loss of life and property, could have been averted had the engineers been able to see more than the few hundred feet lighted by the oil reflector. Several of the terrible disasters resulting to World's Fair special trains, just before the close of the exposition, were mainly due to this fact. The evidence brought out by the coroner's inquest after one of these accidents showed that the night on which it occurred was very dark and foggy and that the train employees could scarcely see 200 feet beyond the engine's pilot. One of the engineers testified that if he had had a few hundred feet more space he could have brought his train nearly to a stop and greatly diminished the effect of the collision.

While several railway companies are experimenting with improved headlights, we believe that the Georgia Southern & Florida is one of the first, if not the first line in this country, to use electric light regularly in operating its trains. In a letter to the MANUFACTURERS' RECORD Receiver W. B. Sparks writes as follows:

"We have eight electric headlights. They cost about \$375 each in place on the locomotive. The cost of maintenance is not greater than the oil light. An old headlight will not throw its light on a very dark night more than 150 feet, and it is impossible for an engineer to slow up his train in that distance, even with the emergency brake. The electric light throws its light from a half to three-quarters of a mile. Obstructions can be easily seen at that distance, and some of our engineers claim that a switch disc can be more easily detected by it at night than in the daytime. These lights do away with switch lights, which is quite a saving to roads that use them to any great extent.

"Railroads such as ours, running through the pine lands of the South, kill a great many cows. During our rainy season the lands along the line of road become very wet; in places they are entirely covered with water, and the cattle come upon the track seeking some dry spot on which to sleep. We have killed, when we used the old headlight, as many as thirteen at one time, and our claims for stock killed per month have sometimes amounted to over \$7000. The engines using the electric headlight have never killed a cow, and I am confident that the saving in stock claims alone will more than pay for the lights within the next two years."

The advantages of the electric headlight

in certain respects can be seen at once by this letter. They apparently are as much superior to the old-style reflector as the air brake is to the hand brake.

Low Rates to Land-Seekers.

The Southern Passenger Association has made a move which will be of the utmost benefit to the South by announcing a series of monthly low-rate excursions from the North and West to Southern points. General Passenger Agent C. P. Atmore, of the Louisville & Nashville, has been one of the most energetic workers to bring this about, and the decision is in a measure due to his efforts. On February 8, March 8 and April 9 tickets will be sold at one fare for the round trip by all roads having Southern connections. The time is limited to twenty days, but this is ample to give prospectors a chance to see for themselves what inducements the Southern States offer.

The greatest need of the railroads in the South is to secure settlers from the North and Northwest, as there are undoubtedly greater opportunities for successful agricultural pursuits in the South than there are in the North, and this interest pays better in the South than in any other portion of the country. The one-fare rate for the round trip is certain to draw a large number of land-seekers to the South, and offers an excellent opportunity for colonization and immigration to arrange excursions at a small cost.

Short Route to Washington.

Regarding the Washington-Baltimore electric road, David M. Newbold, of Baltimore, the president, states that the line will have an independent entrance into Baltimore and have its own depot and terminals. It will enter Washington by the Eckington & Soldiers' Home Railway. He states the road will be about twenty-eight miles long, will be completed by September 1, 1894, and that the round-trip rate between the cities will be \$1.00. The gage will be four feet eight inches. Mr. Newbold claims that the company is entirely independent of the Baltimore Traction Co.

Railroad Notes.

THE Norfolk & Western has added a number of handsomely-finished passenger coaches to its rolling stock.

THE Norfolk & Western Railroad Co. has ordered from the Baldwin works nine compound consolidation freight locomotives.

THE Nashville (Tenn.) Trust Co. and T. W. Wrenne have been appointed receivers of the United Electric Railway Co., at Nashville.

HENRY STOCKBRIDGE, JR., of Baltimore, has been appointed receiver of the Gunpowder Railroad Co., which controls a feeder of the Western Maryland four miles long in Baltimore county. G. W. S. Hoffman, of Baltimore, is president.

G. GUNBY JORDAN, the general manager of the Georgia Midland & Gulf, has issued a circular to the bondholders informing them that the company is ready to pay half of the January interest, but will issue short notes covering the remaining half.

IT is announced that the Norfolk & Southern Railroad Co. has awarded contracts to builders for the construction of six depots along the line from Norfolk to Edenton, N. C. This company is improving its property and rolling stock generally.

THE bondholders of the Louisville, St. Louis & Texas have determined to foreclose their mortgage and reorganize the road. The securities will be deposited with the Atlantic Trust Co. of New York as a preliminary step.

THE Gulf, Beaumont & Kansas City, although but partly completed, earns enough from local traffic to more than pay its operating expenses.

FINANCIAL NEWS.

The Financial Situation.

Since January 1 over sixty-five plants employing from 250 to 5000 men have resumed operations, against twenty of various sizes which have shut down. The largest of the latter employed 4000 men. A steel-working concern in Pennsylvania reports so many orders that it has doubled its operations. Chicago packers say the European demand for meat is unusually heavy. These are a few indications of a continued gradual improvement. It seems to be in the air around Wall street that the Wilson bill will not be passed in its present shape, and experts say this is the cause of the upward stock movement from one to five points this week. The rate of exchange has prevented further gold exports. Across the water it is predicted that Italy will go into bankruptcy in six months. The flow of money from London continues, but British bankers anticipate an increase in reserves early in the year.

The American iron market remains unchanged. All authorities agree that the stocks in the hands of consumers are at a minimum, and that slight causes could produce a brisk demand at present price. As Congress is coming to a head on the tariff matter, buyers are all holding off and little change may be expected before the last of the month. Prospects for spring business are somewhat better than anticipated, according to the mercantile agency reports. In the South the railroad situation has materially improved, especially in Georgia, where there is increased hope for reorganizing the Central system. The reported sale of the Cape Fear & Yadkin Valley shows foreign confidence in Southern "rails" has by no means died out. The remarkably good condition of Southern business as shown by 1893's record, which we publish elsewhere, will tend to stimulate those who are engaged in business in this section or are interested in new enterprises. A number of mercantile failures have occurred during the week, principally due to the dullness of fall trade. The list is no longer than was to be expected with the first of the year. The opportunities which outsiders are noting for the placing of capital in real estate and other ventures are shown by the many important items in our Construction Department.

More Southern Dividends.

The following dividends have been declared by Southern banking and other corporations in addition to the list published in last week's number. One of the remarkable features is the large dividends paid by some of the smaller banks in sections where the money stringency was most acute.

Maryland.

Baltimore.—Associated Firemen's Insurance Co., 4 per cent. semi-annual.
Howard Fire Insurance Co., 3 per cent. semi-annual.
Third National Bank, 2½ per cent. semi-annual.
Emerson Drug Co., 16 per cent. annual.
Centreville.—Queen Anne's National Bank, 2½ per cent. semi-annual.
Centreville National Bank, 4 per cent. semi-annual.
Frederick.—Fredericktown Savings Institution, 4 per cent. semi-annual.
Franklin Savings Bank, 3 per cent. semi-annual.
Hagerstown.—First National Bank, 6 per cent. semi-annual.
Frostburg.—First National Bank, 3 per cent. semi-annual.

Virginia.

Fredericksburg.—National Bank of Fredericksburg, 4 per cent. semi-annual.
Winchester.—Shenandoah Valley National Bank, 5 per cent.
Richmond.—Home Building Co., 4 per cent. semi-annual.
Danville.—Merchants' Bank, 3 per cent. semi-annual.
Commercial Bank, 3 per cent. semi-annual.
Harrisonburg.—First National Bank, 5 per cent. semi-annual.
Norfolk.—Norfolk National Bank, 3½ per cent. semi-annual.

Georgia.

Augusta.—National Bank of Augusta, \$2.50 per share.
Columbus.—Merchants and Mechanics' Bank, 4 per cent.
Georgia Home Insurance Co., 3 per cent.
Chattahoochee National Bank, \$3.00 per share.
Rome.—First National Bank, 6 per cent. semi-annual.
Washington.—Exchange Bank, 4 per cent. semi-annual.
Cedartown.—Commercial Bank, 4 per cent. semi-annual.
Atlanta.—Exchange Bank, 8 per cent. annual.
Savannah.—Brush Electric Light Co., \$2.00 per share semi-annual.
Chatham Bank, 3 per cent. semi-annual.
Germania Bank, \$3.00 per share semi-annual.
Canton.—Bank of Canton, 8 per cent. annual.

Alabama.

Montgomery.—First National Bank, 3 per cent. semi-annual.
Merchants and Planters' National Bank, 3 per cent. semi-annual.
Bridgeport.—Bridgeport Investment Co., 1½ per cent.

Louisiana.

New Orleans.—New South Loan Association, 5 per cent. semi-annual.
Crescent City Railroad Co., 3 per cent. semi-annual.
City & Lake Railroad Co., 7 per cent. annual.
New Orleans Gas Co., \$3.00 per share semi-annual.
Louisiana Light Co., \$3.00 per share semi-annual.
Whitney National Bank, 4 per cent. semi-annual.
Bank of Commerce, 3 per cent. semi-annual.

Texas.

Dallas.—Consolidated Street Railroad 6s (interest).
Galveston.—Improvement & Loan Co., \$4.00 per share.
First National Bank, 6 per cent. semi-annual.
Texas Guarantee & Trust Co., 4 per cent. semi-annual.
Velasco.—Velasco National Bank, 8 per cent.

Kentucky.

Louisville.—German Security Bank, 5 per cent. semi-annual.
Bank of Kentucky, 4 per cent. semi-annual.
Public Warehouse Co., 4 per cent. semi-annual.
Union National Bank, 3 per cent. semi-annual.
Third National Bank, 3 per cent. semi-annual.
German Insurance Bank, 5 per cent. semi-annual.
German Insurance Co., 3 per cent. semi-annual.
Western Insurance Co., 4 per cent. semi-annual.
Western Bank, 4 per cent. semi-annual.
Globe Building & Loan Co., 7 per cent. semi-annual.
Germania Safety Vault & Trust Co., 3 per cent. semi-annual.
Henderson Bridge Co., 2½ per cent. semi-annual.
Georgetown.—Deposit Bank, 5 per cent. semi-annual.

Arkansas.

Dardanelle.—People's Bank, 12 per cent. annual.

South Carolina.

Columbia.—Central National Bank, 3 per cent. semi-annual.
Timmonsville.—Bank of Timmonsville, 8 per cent. annual.

Missouri.

St. Louis.—Bremen Bank, \$1.00 per share semi-annual.
Franklin Bank, 6 per cent. semi-annual.
Mullanphy Savings Bank, 5 per cent. semi-annual.
German-American Bank, \$6.00 per share semi-annual.

RAILROADS.

Atlanta & West Point, 3 per cent. semi-annual.
City & Suburban Railway Co. (street), Baltimore, Md., 1 per cent. on capital stock.

Will Not Hinder the Reorganization.

A cablegram has been published in the daily press stating that the Glasgow (Scotland) debenture holders of the Jarvis-Conklin Mortgage Trust Co. have rejected the reorganization plan accepted by the American creditors and have taken steps to secure their interests.

The American managers of the corporation make the following statement regarding this action:

"The English and Scotch debenture holders represent but a very small part of the debt and exercise no influence. Our company's plan of reorganization, which provides for a 4 per cent. interest instead of 5 per cent., has been approved by a majority of the holders and is regarded as a liberal plan."

Proposition to West Virginia Creditors

The syndicate which has been organized to adjust the amount which, it is asserted, West Virginia owes as a State debt has sent out a letter to creditors containing the following plan of settlement:

"The adjustment company will offer to surrender all the certificates which may be deposited under the agreement of October 16, 1893, in exchange for such an amount of new bonds or other avails as West Virginia provides to discharge her proportion of the interstate debt.

"A tender of all the deposited certificates shall accompany a petition to the legislature of Virginia to authorize a commission to bring about a settlement with West Virginia.

"All questions touching the apportionment of the new bonds or avails between the different classes of certificates shall be determined by a tribunal of three, one to be appointed by the advisory board, one to be appointed by the adjustment company and the third to be appointed by the two thus chosen. Any vacancy in this tribunal shall be filled by the party respectively appointing."

Bill to Relieve Banks.

A dispatch from Washington states that the House committee on banking and currency has discussed and will report favorably the substitute introduced by Mr. Brawley, of South Carolina, suspending the tax of 10 per cent. on certain bank issues and clearing-house certificates issued between August 1 and October 15, 1893, the stringency period.

New Financial Institutions.

The officers of the Grundy County National Bank, recently organized at Trenton, Mo., are W. E. Austin, president, and R. M. Cook, cashier.

It is reported that Charles M. Burns is to establish a private bank at Wadesboro, N. C., with \$50,000 capital, to be called the Bank of Anson.

A. R. Chisolm & Co., bankers and brokers, of New York, have opened a branch office in Baltimore.

J. H. Smith, A. R. Pendleton and others have incorporated the Union Loan & Guarantee Institution at Baltimore with \$50,000 capital.

The Florida Investment & Savings Bank has been chartered and organized at Jacksonville with \$50,000 capital. A. W. Barrs is president; L. Furchgott, vice-president, and H. W. Clark, secretary.

The Industrial Investment & Banking Co. has been organized at Jacksonville, Fla., to engage in insurance and banking business. Following are the officers elected: President, C. B. Towns; treasurer, Henry G. Aird; secretary, George M. Nolan; chief medical director, Dr. F. D. Fernandez.

New Bond and Stock Issues.

The Opelika & Auburn Street Railroad Co. wants to float \$35,000 of 6 per cent. bonds guaranteed by a mortgage on a line seven miles long. The interest will be guaranteed for three years by the company constructing the road. Address John L. Cowan, Opelika.

The city of Birmingham, Ala., has sold \$150,000 worth of 6 per cent. bonds to Evans & Co., of that city, for \$150,500.

The town of Quitman, Ga., has voted to issue \$20,000 in bonds to secure a system of water works and an electric-light plant.

The directors of the Dover & Statesboro Railroad Co. have authorized the issue of \$60,000 in 6 per cent. gold bonds. Receiver Marion Irwin at Augusta, Ga., will give information.

The Mercantile Trust Co. of Baltimore has sold \$100,000 worth of Norfolk (Va.) 5 per cent. bonds at 104 and interest.

An act is pending in the Virginia legis-

lature to authorize the city of Portsmouth to issue \$150,000 in 6 per cent. bonds for public improvements. The mayor will give information.

Mayor E. P. Maddox will sell \$25,000 in 6 per cent. bonds to build a schoolhouse at Lampasas, Texas.

Failures and Suspensions.

The Stubbs-Grier Hardware Co., of Brunswick, Ga., has suspended, with assets of \$23,000 and liabilities of \$14,000.

The business of Cely Bros. in Greenville, S. C., has been suspended by order of the court. They have been estimated as worth \$35,000.

The Paris (Texas) Dry Goods Co. has made an assignment to M. J. McDonald. It has a stock on hand valued at \$150,000.

John W. Buchanan has been appointed receiver of the Southern Land & Improvement Co. at Frankfort, Ky.

W. B. Sims, clothing merchant, of Jefferson, Texas, has made a deed of trust to Julius Ney to benefit creditors. The claims amount to \$23,015.

R. R. Scott, merchant, of Scottsville, Texas, has made an assignment to P. G. Whaley. Assets are \$60,000 and liabilities \$23,000.

The Haynes Realty Co., of St. Louis, has made an assignment to Charles Saltz, of that city. The liabilities are about \$160,000 and assets equal.

W. N. Sadlin, of Morrilton, Ark., has failed, with liabilities of \$17,000. He was a general merchandise dealer.

J. H. Blackburn & Co., plumbers and gas-fitters, at Chattanooga, Tenn., have made an assignment, with liabilities of \$11,000.

George Wolf & Co., jewelers, of Louisville, Ky., have assigned with \$100,000 assets and \$65,000 liabilities.

John H. Montague, of Richmond, insurance agent and banker, has assigned to Percy Montague and R. H. Stegar. Liabilities are \$57,000 and assets \$28,000.

Financial Notes.

H. J. Lamar has been re-elected president; G. B. Turpin, vice-president, and Joseph W. Cabaniss, cashier, of the Exchange Bank of Macon, Ga.

THE Tampa Building & Loan Association has demonstrated its ability to stand alone during the financial panic. During the first six months of this year the association loaned \$39,900, but from June 1 to November 1 it had a constant run on it, because some of its members were compelled to have their savings to live on. In that five months \$20,000 were withdrawn and few loans could be made, but the books show that loans amounting to \$7000 were made during November, showing that its business is again flourishing.

THE announcement is made that the National Bank of Augusta, Ga., and the Planters' Loan & Savings Bank will be consolidated under one management.

THE Citizens' National Bank of Waxahachie, Texas, has nearly completed a handsome three-story building which it will occupy for its business. The bank has a large surplus, and its report shows it to be flourishing.

THE Frederick (Md.) Clearing-house Association has elected W. H. Duvall, president; J. V. Silance, vice-president; E. C. Markell, secretary and treasurer. Since its organization, eight months ago, the association's clearances have aggregated \$3,289,632.70.

THE Pulaski (Va.) Loan & Trust Co. has elected George L. Carter, president; H. G. Robinson, vice-president; O. P. Jordan, cashier; B. F. Baldwin, assistant cashier.

MR. D. G. AMBLER, president of the National Bank of the State of Florida, has resigned his position.

PHOSPHATES.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, January 11.

In the phosphate market there has been a fairly active tone during the week, and the situation is more satisfactory. Advices from producing points report an active development, especially in Florida. South Carolina land mining is quite active, with a good output expected for the current year. The arrivals of phosphate rock during the past week were as follows: Schooners Agnes Manning, from Ashpoo, with 750 tons, and S. B. Marts with 801 tons and B. F. Lee with 600 tons, both from Charleston. We note the following charters: E. L. Cottingham, St. Helena sound to Baltimore, and Calina and Anna T. Ebner, both to load at Charleston, S. C., for Baltimore. There is a steady tone at the close, with quotations unchanged. South Carolina rock \$5.00 for Charleston, \$4.75 for Ashley river and \$5.00 to \$5.25 for Ashpoo, S. C., all f. o. b. Florida rock is firm at \$5.25 to \$5.50 for 60 per cent. river pebble, \$5.50 to \$6.00 for 65 per cent. and \$6.25 to \$6.50 for 70 per cent., all f. o. b. Charlotte Harbor or Tampa.

FERTILIZER INGREDIENTS.

The market has ruled quiet during the past week, but prices have remained very steady. The bulk of transactions throughout the week have been at prices within the range of quotations. The recent improvement in cotton is expected to encourage Southern manufacturers and produce a general beneficial effect upon the trade. Nitrate of soda is steady, with a good demand. The following table represents the prices current at this date:

Sulphate of ammonia.....	\$ 3 40@	\$3 75
Nitrate of soda.....	1 87 1/2@	2 00
Hoff meal.....	2 35@	—
Blood.....	2 60@	—
Azotine (beef).....	2 60@	2 70
Azotine (pork).....	2 60@	2 70
Tankage (concentrated).....	2 40@	—
Tankage (9 and 20).....	35 and 10 cts.	—
Tankage (7 and 30).....	30 00@	21 00
Fish (dry).....	27 00@	28 00
Fish (acid).....	18 00@	20 00

CHARLESTON, S. C., January 9.

The phosphate market for the past week remained quiet, few contracts for future delivery being made. Numerous inquiries are being made for large cargoes, but at figures which offer no inducement for sellers to dispose of their product, as a rise in price in the close future is anticipated. Prices remain about the same: \$4.50 for crude, \$5.00 to \$5.20 for hot-air-dried and \$7.50 for ground rock. The coastwise shipments for the week are: Schooners Thos. W. Stone, 540 tons, for Wilmington, N. C.; C. E. Schmidt, 800 tons, for Baltimore, Md.; Edgar C. Ross, 535 tons for Seaford, Del.; B. F. Lee, 600 tons, for Baltimore; May Williams, 825 tons, for Baltimore; D. K. Baker, 740 tons, for New York. The schooner Warwick, 580 tons, from Bull River, S. C., bound to Elizabethport, N. J., put into this port in distress and is now discharging her cargo. The fertilizer shipments to the interior begin to assume large proportions, several works shipping between 200 and 300 tons per day. Indications are that the season will be a late one, the bulk of trade being done in February and March. The export shipments of crude phosphate from this port from September 1 to January 6 are 39,290 tons crude and 300 tons ground rock.

Phosphate and Fertilizer Notes.

THE Homeland Phosphate Co., near Bartow, Fla., which has been idle for some months, will shortly commence operations on an extensive scale.

THE fertilizer trade of the section of the State adjacent to Savannah is unusually active, and preparations are being made for an increased business this season. Fourteen schooners have already arrived at

Savannah with cargoes of guano and fertilizer material for various manufacturers in the State, and four more are due loaded with guano. Several other vessels are also chartered for similar freight. The receipts of fertilizers are from Baltimore, Boston and New York.

THE following vessels have been chartered at Fernandina, Fla., for cargoes of phosphate for the current month: Cie des Phosphate de France, steamship Tyndale and one not named; Illinois Phosphate Co., steamship Annandale and bark Darwin; Dannelon Phosphate Co., steamship Oswald. Estimated shipments for the month 8000 tons.

THE case regarding the appointment of a receiver for the Port Royal Fertilizer Co. came up before Judge Izlar in Charleston last week, and the judge reserved his decision after hearing argument. The Port Royal Fertilizer Co. is owned by Comer, Hull & Co., who also have works at Savannah known as the Savannah Fertilizer Co. The works at Port Royal have not been in operation for some time, and the buildings were considerably damaged by the late storm.

PHOSPHATE operations in Polk county, Fla., are at present being carried on, perhaps, more extensively than at any other time since the establishment of this industry. It is stated that there are now nineteen plants, all in running order. The following companies comprise the list: Bartow Phosphate Co., Excelsior of New York, Lake Hancock Phosphate Co., Bone Valley Phosphate Co., Land Pebble Co., Terra Ceia Phosphate Co., Florida Phosphate Co., Limited, Pharr Phosphate Co., Moore & Tatum Co., Foote Phosphate Co., Homeland Phosphate Co., Whitaker Phosphate Co., Virginia-Florida Phosphate Co., Fort Meade Phosphate Co., Belle Phosphate Co., Massachusetts Phosphate Co., United States Phosphate Co. and the National Phosphate Co. There are two companies organized, but not yet working, viz, the Palmetto Phosphate Co. and the Clear Spring Phosphate Co.

To Form an Immigration Company.

THE Young Men's Business League at Augusta, Ga., has decided to make a systematic effort to induce immigrants of a desirable character to locate in Georgia. The immigration committee of the league is organizing a land and immigration company, in which it is hoped to interest land-owners especially. The outlines for the plan of such a company as is proposed are these: All parties in Augusta or the surrounding country who own land either in large or small bodies, who will enter said land in the company and receive for same stock in the company, will be invited to do so. The books of the company will also be opened for cash subscriptions to the stock, which will be between \$250,000 and \$1,000,000. After the company has been formed and it has control of 50,000 or 100,000 acres of land the company will be conducted in a business way. Practical steps will be taken to advertise the advantages of this section for farming to the farmers of the Northwest and East. Agents will be sent out to bring immigrants to settle these lands. Excursions will be arranged from the farming sections of the Northwest and other sections of the Union from which immigrants may come. The co-operation of the railroads will be secured. The land of the company will be sold as cheap as possible in small farms upon as long time as the company can afford. The work will be continued until all of the land of the company shall be sold.

It is believed that the various land-owners who will enter into the scheme will realize fair profits from the sales, while the increase in the farming population cannot but be of much benefit. Col. D. B. Dyer is one of the leaders in the enterprise.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Markets for Cottonseed Products.

NEW ORLEANS, January 8.

THE cottonseed-product market for the past few weeks has been very uninteresting, due to a great extent to the great many holidays during that time. There has been very little oil that has changed hands, buyers' and sellers' views being apart. The mills in this section are holding prime crude at twenty-eight cents loose, while the views of Western buyers are not above twenty-six to twenty-six and one-half cents, according to location of mill and quality of oil. A very light export demand, owing to the low prices ruling abroad for refined, makes it difficult to place any round lots of refined oil. The West is about the best outlet just now for prime crude, but the packers are just buying as their demands or needs require. There are conflicting statements as to the oil held by the mills in all sections, and especially in Texas, and while many contend that there are large stocks held, others think that the mills have been letting go gradually by selling a few tanks now and then to make storage room for more oil as they continued to work. Cake and meal are in slow demand at prices ranging from \$22.25 to \$22.75 per long ton f. o. b. steamer here for export. We understand that there has been considerable complaint abroad, owing to the quality of shipments of cake not being up to the standard grade. This, we think, is principally due to the careless way in which mills put up their product, not taking proper care as to its packing or quality, and the inferior sacks which many of them use. The market at present is exceedingly dull, and we quote prime crude loose here at twenty-six to twenty-six and one-half cents bid, twenty-eight cents asked; refined, none but inferior grades offering, at thirty-one to thirty-three cents here in barrels; cottonseed meal jobbing at depot, \$20.00 per ton of 2000 pounds in carload lots; for export, at \$22.50 per long ton f. o. b. steamer bid; prime cottonseed cake, \$22.25 to \$22.50 per long ton f. o. b. bid; linters dull at A, three and three-quarters to four cents; B, three and one-quarter to three and one-half cents; C, two and one-half to three cents, according to style of staple; soap stock we quote at one to one and one-eighth cents; foots, one and one-half to one and three-quarters cents; ashes, \$17.00 to \$18.00 bid, none offering.

JAS. RAINEY & Co.

ROTTERDAM, December 23.

THE market for this article has been very quiet during the past week, and very little business has been transacted. Nobody is inclined to transact much business the last days of the year, and the butter-makers will buy only if they can have a great bargain. The owners are not inclined to sell below their quotations, and therefore almost no business has been done. This is the fact with all articles.

THE tendency of the oil market is not as firm as it has been. The weather is not cold; the thermometer is always at about 10° above zero; the consequence is that not much oil is mixed now. England is buying very little; the orders are not important. It seems that there is still much Australian butter in England, and this article is a large competitor of margarine-butterine. The stock of oil is small this week; about 2000 barrels have arrived, but certainly 30,000 barrels are on the way for Rotterdam.

NEXT week business shall also be very slow, but a better market for the article is expected after January 1. At this moment it is difficult, or rather impossible, to sell

any important quantity. The butter-makers don't want oil now; they have only limited orders for butterine, and, because the weather is so soft, they use very little oil. The price for choice oil is thirty-three guilders delivered here, but it is impossible to sell at this or at about this figure. Owners, however, don't like to sell the goods at some guilders less than their quotations, and therefore they don't sell, and expect to obtain their price after some weeks. As soon as the weather shall be cold and the butter manufacturers receive more orders, the butter-makers shall be obliged to buy large quantities at quoted prices.

G. W. SANCHES.

[NOTE.—The price in guilders per 100 kilos multiplied by 1.43 will give the price in cents per gallons.—ED.]

Cottonseed-Oil Notes.

AT a late meeting of the arbitration committee of the New York Produce Exchange several amendments to the rules governing the sale of cottonseed oil were made. Provision was made in rule 2 for the licensing of weighers, who need not necessarily be members of the exchange. Rule 3 provides that packages must be new or thoroughly-cleaned refined-petroleum barrels, painted and varnished. An amendment to rule 9 provides that crude oil to pass as prime must produce prime summer yellow grade by the usual refining methods, with a normal loss in weight. A new rule fixes a standard for "choice" crude, a grade not heretofore provided for in the rules. It is the same as that governing prime crude, except that it fixes a fatty-acid test not to exceed 1 per cent. Rule 16 is also a new one and relates to soap stock, which must hereafter be sold on basis of 50 per cent. free fatty acid, soap stock containing less than 45 per cent. of fatty acids not being a good delivery.

Plans for Baltimore's Courthouse.

THE courthouse commission of Baltimore has issued a pamphlet giving particulars of the structure it proposes to build in that city. The pamphlet was prepared under the supervision of Professor Ware, the consulting architect. The site of the new courthouse is about 199 feet by 327 feet, and the eastern end, on Calvert street, is from twenty-three to thirty feet lower than the western end. The total floor space for present needs is about 80,000 square feet, but there will be required additional accommodation to the extent of about 13,000 square feet. The building is to be fire-proof, marble or white granite preferred. Accommodations are required for the Supreme Bench, the Superior Court, the Circuit Court, the Criminal Court, the Court of Common Pleas and the City Court, each of which is to have an additional courtroom; the Orphans' Court, the sheriff's offices and lock-ups, the police department, the license department, the bar library, a room for the superintendent and one for the storage of deeds and records. In the basement are to be the police department, sheriff's offices, license department, superintendent of courthouse, space for the reception of deeds, lock-ups and attorneys' rooms and the location of the courtrooms, etc. There are to be in all about 140 rooms, the largest courtrooms to be fifty feet by sixty feet, whilst the additional courtrooms range from thirty-five feet by forty feet to thirty feet by thirty feet. Plans will be received until April 9, 1894.

SARAH KNOWLES BOLTON has contributed to the reading public a work entitled "Famous Voyagers and Explorers," published by Crowell & Co. The author has presented a very interesting account of the lives of noted discoverers and explorers, such as Columbus, Sir Walter Raleigh, Marco Polo, David Livingstone and others.

MECHANICAL.

Perfect Combustion by the Use of the Gadey Air-Grate.

By H. M. Underwood.

If the question be asked, what is the greatest advance made during the last century in connection with steam plants in the way of producing steam at a low figure, there is but one answer possible, i. e., the obtaining of so-called perfect combustion.

The boilers and engines have been brought to a high state of efficiency by the constant and steady growth of improvements in the way of inventions. The ar-



THE GADEY AIR-GRATE.

rangements for the transmission of power and steam over a large area are scientific and successful, but when we come to the details of firing our boilers and obtaining from them their full capacity without straining or causing injury to them, as well as getting all the carbon from the coal used, we have found it such that one and all wonder how it is that these faults have not been overcome, when the mechanical and engineering mind of today has developed many much more complicated appliances other than those used in trying to obtain from coal all the good contained therein.

We enter a city today and the first thing that we notice are the clouds of thick smoke which surround the many handsome office and manufacturing buildings; we go down into the boiler-room of several of them and find two or three men working hard to keep up steam; we look into the fire-box and ash-pit; what do we find? Coal partly burned and clinkers obstructing the passage of air between the grates, and also, in many cases, we find clinkers adhering to the grates. This simply means poor combustion, endless expense and useless labor.

Cannot some device be introduced that will thoroughly extract from the coal all the carbon contained therein, thereby creating combustion and bring the smoke down to a minimum?

In answer to this I am able to state that a grate-bar has been ingeniously worked out which evades all these difficulties and brings the matter of perfect combustion up to the high and technical standard already obtained by the other branches of engineering and mechanical service.

The grate-bar in question is that of the Brown Bros. Manufacturing Co., of Chicago, and known as "the Gadey air-grate," and its many advantages are the results of a long familiarity with the difficult conditions existing. The Gadey air-grate consists of a hollow grate-bar with a slot in the upper surface next to the coal, and through which oxygen is passed in sufficient quantity to create rapid and perfect combustion with the air of natural draft. This is done by the use of a small pressure-blower, which passes air in at one end of the grates directly in the centre of the bars at opening marked "C" in cut, called the supply chamber, which is kept continuously full of air by means of the small pressure-blower above referred to.

"A" "A" is a narrow slot about one-eighth of an inch in width, running the entire length of each grate-bar, and

through which the air passes from supply chamber "C."

"B" "B" is the opening for natural draft, about one-half of an inch in width, running the entire length between the bars, at the same time allowing for any one bar to be easily removed and a new one inserted without disturbing the other bars.

"D" is a planed surface, giving an air-tight joint between the bars.

The plan is so simple that the mere absence of complexity serves to hinder a quick appreciation of its remarkable utility. The ease with which a large battery of boilers can be handled by a minimum force of men, and also with which these grates can be

applied to any make of boiler, ought to insure its general adoption.

Three essential points in operating a steam plant are: First, perfect combustion; second, durability, and third, economy. A brief consideration of each of these will bring out the essential features of the Gadey air-grate.

Perfect combustion.—Combustion may be defined as "the union of two dissimilar substances, involving light and heat." In ordinary practice, one of these is always the oxygen in the atmosphere and the other is the fuel employed. Every pound of fuel requires a given quantity of oxygen for its complete combustion, and thus a given quantity of air. This varies with different fuels. The finer the substance of the fuel used the quicker and more perfect the combustion, provided it can be supplied with the proper amount of oxygen. This is a very strong point in favor of this air-grate, as soft-coal screenings when burned will evaporate as much water with one ton of screenings as the ordinary grate-bar can with one ton of the best block coal. This evaporate is not from a theoretical point of view, but from actual practice.

The loss of the heating power of coal through imperfect combustion is generally supposed to be from 30 to 40 per cent. In order to obtain perfect combustion the whole mass of coal upon the grates must be thoroughly supplied with oxygen. For this reason, as is well known, fine coal cannot be used on common grate-bars, because it cokes over and thereby excludes the oxygen. The air-blast through the hollow grate-bar carries the oxygen to every part of the mass of coal, and aided by the natural draft, produces perfect combustion. A moderately thick and hot fire with rapid draft and rapid combustion uniformly gives the best results, and in all experiments and tests the highest results are obtained when the air is introduced through the grate-bars.

Durability.—By the circulating of air through the hollow grate-bar it is impossible for them to become overheated. Bars that have been in use for two or three months are as black today as when first put in. The difference in the temperature between the grates and the coal, caused by the circulation of air, prevents clinkers from adhering to the grate-bars, thus making it much easier to remove what few clinkers may be found.

Economy.—One of the first questions asked with regard to improvements and new devices is, "What will it cost to operate?" Happily this question is one that can be most satisfactorily answered in be-

half of the hollow grate-bar. To anyone using block coal at from \$3.00 to \$3.50 per ton the value of this air-grate is most apparent, as screenings costing from \$1.00 to \$1.75 per ton can be used, and at least one-half of this difference can be relied upon as being saved. Boilers now equipped with this make of grate are showing an increase in capacity and saving in cost of operating of from 25 to 30 per cent. over any results heretofore obtained.

The work of putting in place these grates is very simple, for in making patterns the exact size and shape of the bars that are to be replaced are copied, thereby avoiding any change in the construction or form of the fire-box. It must be remembered that this method of supplying air does not create a forced draft, as the natural draft is used at all times, which is taken through the openings between the bars, and just enough air blast used through the bars to insure perfect combustion. It must also be remembered that by obtaining perfect combustion, which is done with this make of grate, the great annoyance of smoke is reduced at least from 60 to 80 per cent.

"Necessity is the mother of invention," and with this in view the Brown Bros. Manufacturing Co., through Mr. Chas. Gadey, has worked out and brought this form of air-grate up to a high state of perfection.

The Brown Bros. Manufacturing Co. has been located at the corner of Clinton and Jackson streets for the last thirty-three years, and during its business career has devoted its entire time to the development and the bringing to the highest possible standard several mechanical and engineering devices. It is the intention of this company to dispose of State and territorial rights for the sale and introduction of this famous Gadey air-grate.

Mineral Wool—What It Is and Its Uses

What is known in the United States as mineral wool and in England as silicate cotton is manufactured from the slag of iron furnaces by fire and steam. Analysis of the slag shows a mixture of silica, alumina, lime and magnesia in various quanti-

ties, with further addition of limestone. It is smelted in a cupola, and, as it runs from it, is caught by a very powerful jet of steam, which is the controlling medium.

Mineral wool is used for insulation of heat and cold, for fire-proofing and frost-proofing, for the deadening of sound and vermin-proofing, and for the prevention of disease germs. It is indestructible and odorless. With these incontrovertible merits, why

is such an invaluable article so much neglected by architects and builders?

By many it is considered expensive, and by some builders as an unnecessary expense, or, perhaps, more practically expressing it, an unprofitable outlay, they stating that if it was used by them, they could not get any returns therefor when selling their property. This may be so until the public has learned to know and appreciate the difference between lined and unlined houses, and create a demand for the former.

Why should people who occupy upper floors in flats or sleep in upper rooms any longer endure the extreme heat in summer and cold in winter, when by lining the roof with two or three inches thickness of mineral wool these apartments may be as cool in summer and as warm in winter as the rooms beneath? (The mineral wool will keep in in winter the heat that ascends from the lower parts of the house and prevent its escaping through the roof and upper rooms). The cost is insignificant when compared with the comfort derived from the use of this material (two or three inches thickness only costs three or four cents per square foot), the first outlay being the only one. Again, its use between studing in the walls prevents the rapid spread of fire, which is so general in frame houses (and too often fatal), because the space between each stud is the same exactly as so many chimney flues, and draws the fire from bottom to top of the house in very short order. Now, if these spaces were filled in with mineral wool, which is non-combustible and fire-proof, even only two or three feet above the floors, these open draughts would be effectually stopped.

It is a wonder the insurance companies have not considered this matter as they should do. If they looked into the merits of mineral wool they would no doubt become easier in their rates, and certainly their losses would be largely diminished.

Prof. John M. Ordway, then of the Massachusetts Institute of Technology, some time ago made tests of the various materials in the market as insulators of heat (and per contra of cold). The results given were as follows:

RELATIVE EFFICIENCY OF MATERIALS WHICH PREVENT THE WASTE OF HEAT IN GREATER OR LESS DEGREE, MADE BY PROF. JOHN M. ORDWAY, OF MASSACHUSETTS INSTITUTE OF TECHNOLOGY, FOR BOSTON MANUFACTURERS' MUTUAL FIRE INSURANCE CO.

No.	SUBSTANCE. One Inch Thick. Heat applied 310° F.	POUNDS OF WATER, Heated 10° F. per hour by transmission through one square foot.
1.	Loose wool.....	3.1
2.	Live geese feathers.....	9.6
3.	Carded cotton wool.....	10.4
4.	Hair felt.....	10.3
5.	Loose lampblack.....	9.3
6.	Compressed lampblack.....	10.6
7.	Cork charcoal.....	11.9
8.	White pine charcoal.....	13.9
9.	Anthracite coal powder.....	35.7
10.	Loose calcined magnesia.....	12.4
11.	Compressed calcined magnesia.....	42.5
12.	Light carbonate of magnesia.....	13.7
13.	Comp'd carbonate of magnesia.....	15.4
14.	Loose fossil meal.....	14.5
15.	Crowded fossil meal.....	15.7
16.	Ground chalk (Paris white).....	20.6
17.	Dry plaster of Paris.....	30.9
18.	Fine asbestos.....	49.6
19.	Air alone.....	48.0
20.	Sand.....	62.1
21.	Best slag wool.....	13
22.	Paper.....	14.0
23.	Blotting paper, wound tight.....	21.0
24.	Asbestos paper, wound tight.....	21.7
25.	Cork strips, bound on.....	14.6
26.	Straw rope, bound spirally.....	13.0
27.	Loose rice chaff.....	13.7
28.	Paste of fossil meal with hair.....	16.7
29.	Paste of fossil meal with asbestos.....	22.0
30.	Loose bituminous coal ashes.....	21.0
31.	Loose anthracite coal ashes.....	27.0
32.	Paste of clay and veg'able fibre.....	30.9

The loss is indicated by the length of the lines. Incombustible material designated in roman type; material which may be ignited in italics.

ties, with further addition of limestone. It is smelted in a cupola, and, as it runs from it, is caught by a very powerful jet of steam, which is the controlling medium.

Mineral wool is used for insulation of heat and cold, for fire-proofing and frost-proofing, for the deadening of sound and vermin-proofing, and for the prevention of disease germs. It is indestructible and odorless.

With these incontrovertible merits, why

The Scientific American (architects and builders' edition), telling "How to keep out the heat in summer and keep it in in winter," says: "It is quite as important to build a house so as to keep out the heat in summer as to keep it in in winter. Few architects seem to think of this point, and it is quite common to hear one say that a poorly-built house is a cool house. This is not so, but the contrary is true. It is the rule that the attics of our houses are veri-

table ovens, and so long as nothing but a thin coat of mortar and occasionally a poor board floor separate the sleeping-room from the attic, the former will approach in temperature very nearly to the latter. This difficulty can be overcome very easily and quite inexpensively. Mineral wool placed between the rafters is an absolute preventative of such a condition of affairs, but one who is building a house should not stop here with the use of this material, for its low cost and its many desirable qualities should commend it for use throughout the house wherever cold and dampness are to be kept out and heat is to be kept in in cold weather and out in warm weather. The fire-resisting qualities of mineral wool have long commended it to architects for this specific purpose, but in our opinion this is the least of its qualities, although it is an absolute resistant of fire." No doubt the above-quoted article has had some influence with architects and builders, but still there must be many skeptics, or the use

ing its deafening properties. New uses to which this material is applied come to light continually. Recently, when in conversation with a prominent architect of Brooklyn, N. Y., he told the writer that he had experimented with mineral wool in a cement floor, by laying cement, then a layer of mineral wool, and covering that again with cement. This was done to test its frost-proof qualities. Asked if it was a success, he answered, yes. Cinders had been previously used, but he found the mineral wool would give and take better in expansion and contraction.

In southwest Virginia mineral wool came into great demand for most of the new houses building in that section for the purposes of keeping out rats, mice and vermin, and for this reason alone the users thought it worth all it cost. No doubt many who read this, as well as the writer, have, when living in country houses, been disturbed in the night by the rats running up the walls and between floors and ceilings, and some-

and improved method of construction. The under head performs the work first. Its depth of cut may be changed instantly. The driving belts and all feed appliances are on the right-hand side of the machine. All operating levers and adjusting devices are on the left-hand side, near the operator.

This machine is built to plane on four sides, twenty inches wide and fourteen inches thick, and will vary in size from its full capacity to two and one-half inches wide by three-fourths of an inch thick.

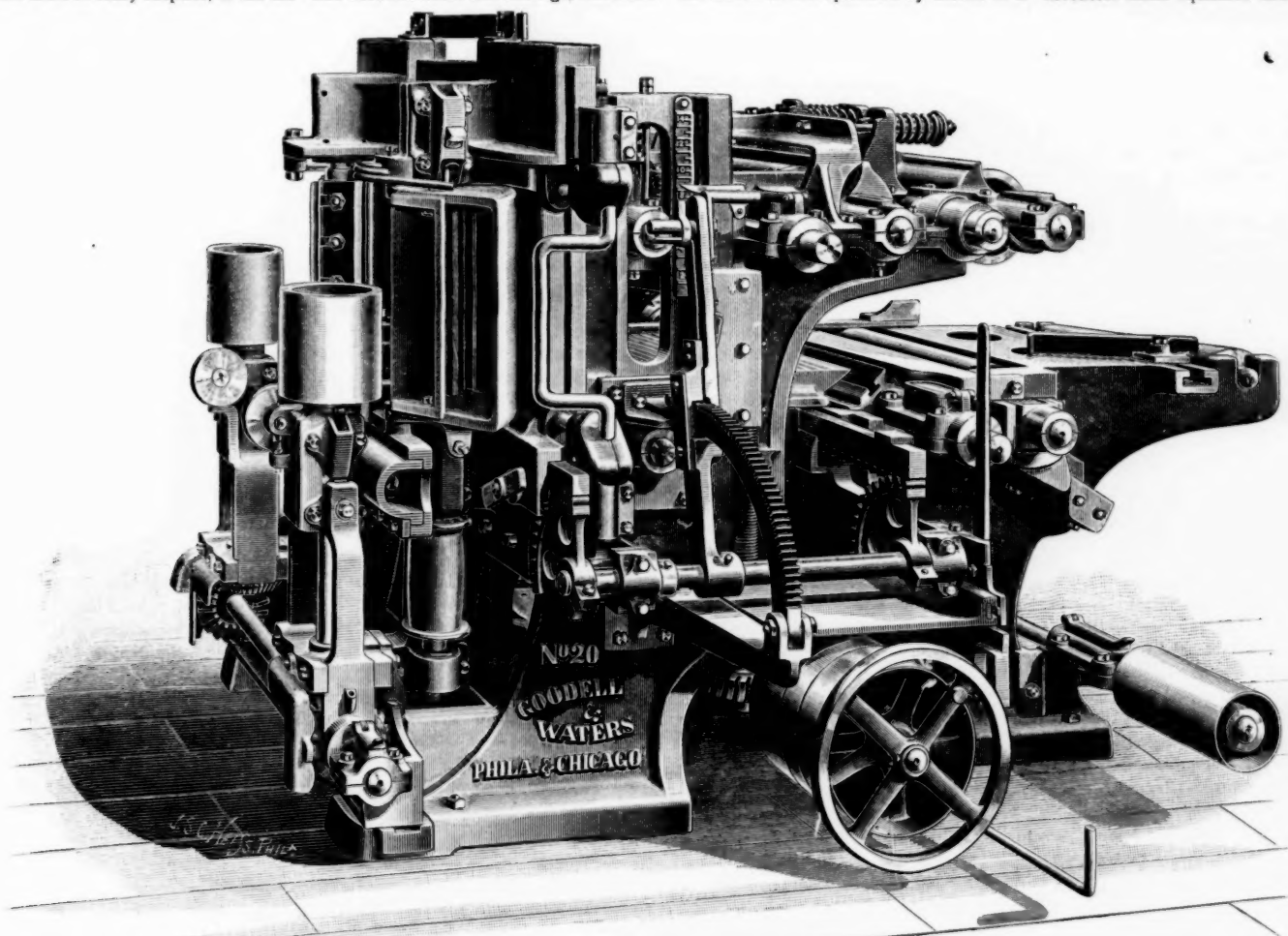
There are in all seven feed-rolls, five horizontal and two vertical. The two vertical rolls are placed at the rear beyond the side-heads. The journal-boxes for the rolls are in halves.

The top feed-rolls, cutterhead and pressure arrangements are all combined, supported on two vertical screws, and operated by power hoist to change rapidly to any thickness. The right-hand side-head combined with vertical delivery-roll and fence are moved in one operation by means of a

Goodell & Waters, Philadelphia, are the manufacturers.

For Protecting Banks, Etc.

Engineers and others interested in levee and embankment work along the Mississippi have had their attention called to a plan for preventing river encroachment, which has been commended by eminent authorities. It is the design of Robert H. F. and Nicholas K. Sewall and consists of a system of wing dams or spur dikes, which, it is claimed, will break the force of the current at angles and bends of a stream and force the channel out from shore, tending to prevent levee breaks and erosion. The dike is constructed of piles braced to form a compact body in single or double rows. They are braced diagonally and can be constructed to resist the strongest currents. When the current is deflected from the shore by striking the dike it forms an eddy on each side, which the inventors claim equalizes and reduces the



NO. 20 SPECIAL QUICK CHANGE DIMENSION PLANER.

of this material would be much more general.

The extensive brewers and packers in the West use it at all times and in all places where they can in lining their cold-storage packing and icehouses, some to the extent of millions of pounds. Transportation charges must make the cost more to them than it would be hereabouts. In steam-pipe and boiler covering mineral wool has proved to be very desirable. The New York Steam Heating Co. has covered all its pipes with this material, thereby reducing the consumption of fuel and expenses so much that the mineral wool is soon paid for, and after that, more profit. It is also used in boiler and pipe covering in the British navy and to a smaller extent in the United States navy; in all probability more will be used. The Pennsylvania Railroad Co. line their passenger and refrigerator cars with it. It is also invaluable as a deadener of sound in floors and walls of theatres, public halls, lodgerooms, etc. Do not forget, also, that it is fire-proof when consider-

times even a greater nuisance by the discovery of a dead rat. For the prevention of these pests the coarsest grade of slag wool is the best. It is so irritating to them by reason of its penetrating qualities that they will not come near it. Much more might be said about the material, but what has already been herein stated should excite inquiry into its merits, which will necessarily lead to a largely increased demand.

No. 20 Special Quick-Change Dimension Planer.

In presenting this entirely new and novel machine attention is called to its most prominent feature, namely, a quick-change timber-dresser. The manufacturers say they are confident such a machine will be favorably received in all establishments working many odd sizes, as it may be changed to any variation in less than a minute. It is thus possible to effect the saving of time and a greater output of work. Particular attention is invited to the new

hand-lever to variations of one-fourth of an inch to twelve inches in width. The left-hand side-head and roll move by means of double screws to any fractional part of an inch, to the amount of eight inches, giving a total width of twenty inches. An indicator at a convenient point of view enables the operator to measure the distances between the heads. This machine is as convenient to change in width as an ordinary gang-ripper.

All heads are solid forgings and slotted on four sides. The top and under heads swing in a seven-inch circle. The journals are two and three-eighths inches in diameter and eleven and one-half inches long. The side-heads are placed at the rear end of the machine, and more easy of access than when in the centre. The delivery feed-rolls move in combination with these heads.

The machine is driven from the rear end. The counter-frame forms a delivery-table. The fast and loose pulleys are sixteen inches diameter, eight inches face, and should run 900 revolutions per minute.

lateral water pressure to a minimum. As the current is deflected to the outer edge of the dike, its base will be strengthened by the deposits of mud and silt produced by the eddies, thus maintaining a permanent foundation and preventing the dam from being carried away.

In a letter to the MANUFACTURERS' RECORD Mr. R. H. F. Sewall states that the Sewall Harbor & Channel Improvement Co. has been formed to use the system in repairing levees, closing crevasses, removing sand bars, deepening ship channels, etc. The piles are to be made so that they can be lengthened to suit any kind of bottom or depth of water. Mr. Sewall's address is 5 Carondelet street, New Orleans.

THE Orange Belt Railway has been succeeded by the Sanford & St. Petersburg Railway Co., which takes control of the rolling stock, roadbed and franchises of the former. The Orange Belt was a road extending from Sanford to St. Petersburg, Fla., 153 miles.

large markets in other States, it was impossible for this section to sell their product. The points brought out in the discussion will be laid before the freight agents at their meeting on the 9th inst. in St. Louis, when it is thought that a favorable rate will be agreed upon. There is a much better demand for lumber expected from Mexico this year than last, as there is considerable activity in railroad building in that country, and as the supply for Mexico is drawn from this section, it will be of immense benefit to southeast Texas. At Orange there is every evidence of increased activity among millmen, and prospects for business seem much brighter than last year. Another new mill company is in process of organization, and \$36,000 of the stock has been subscribed. It is thought there will be no delay in completing the amount required. The Orange Lumber Co., the D. R. Wingate Lumber Co. and the Litcher & Moore Lumber Co. are running on full time, and T. Bancroft & Son will start up on the 8th inst. There is a large stock of long-leaf pine in the booms at Orange, and mills will not hesitate to take orders where there is a fair margin of profit. Cypress timber is very scarce, and the shingle industry consequently suffers. The L. Miller Shingle Co. has closed down for want of cypress timber. The A. E. Smith shingle mill is running, but the shingles are all sold before they drop from the saw.

Iron Markets.

CINCINNATI, January 6.

Naturally, there is little of interest to report of the market in the first few days of the new year. The only feature that is noticeable is a decided increase in the demand for carload lots for immediate shipment. This only proves what is well understood—that nearly all foundries have run stocks down to the lowest possible limit. It is worthy of note that the majority of the foundries expect to increase their melt very soon after the beginning of the year. There is some little improvement in orders for work to warrant these calculations, but yet it must be admitted that new work is slow and disappointing.

Among the furnaces the principal point of interest is the steady decrease of cost of irons made from lake ore and Connellsville coke. The few transactions in ores that are reported are at ruinous prices, and coke can be had at corresponding figures.

In charcoal irons production has almost come to a standstill, and yet prices show no recovery. Should there be any approach to normal demand for car-wheel and malleable irons the first half of this year, the supply of standard charcoal irons will become very short. At present, however, there is practically no demand. The Hinkle furnace closed last week, after the most successful blast ever made by a charcoal furnace. In a continuous run of over three years it averaged upwards of 100 tons per day of high-grade malleable and car-wheel iron. The furnace has but little stock on hand, but will not resume until prices improve.

In the South the only car-wheel furnace running is the Bibb, in Alabama. Exceptionally good work is being done by the Ensley and DeBardeleben furnaces of the Tennessee Coal, Iron & Railway Co. Two active furnaces at Ensley in the last two weeks made 375 tons per day of foundry iron.

We quote for cash f. o. b. Cincinnati:

Southern coke No. 1 foundry.....	\$12 00@12 25
South. coke No. 2 foundry and No. 1 soft	11 00@11 25
Hanging Rock coke No. 1.....	13 75@14 25
Hanging Rock charcoal No. 1.....	18 50@19 00
Tennessee charcoal No. 1.....	14 00@14 50
Jackson county stone coal No. 1.....	15 50@16 00
Southern coke, gray forge.....	10 00@10 25
Southern coke, mottled.....	9 75@10 00
Standard Alabama car-wheel.....	17 50@18 00
Tennessee car-wheel.....	16 00@16 50
Lake Superior car-wheel.....	17 00@17 50

ST. LOUIS PRICES.

Southern coke No. 1.....	\$12 75@13 00
Southern coke No. 2.....	11 50@11 75
Southern coke No. 3.....	11 00@11 25

Southern gray forge.....	10 50@10 75
Southern charcoal No. 1.....	15 50@16 00
Missouri charcoal No. 1.....	14 00@14 50
Ohio softeners.....	16 50@17 00
Lake Superior car-wheel.....	17 50@18 00
Southern car-wheel.....	17 50@18 00
Frick's Connellsville foundry coke.....	4 80

PHILADELPHIA PRICES.

Standard Alabama No. 1 X.....	\$13 25@13 75
Standard Alabama No. 2 X.....	12 25@12 75
Strong lake ore coke iron No. 1 X.....	15 50@15 75
Strong lake ore coke iron No. 2 X.....	14 50@14 75
No. 1 standard Southern.....	14 00@14 50
No. 2 standard South. and No. 1 soft	12 50@12 75
No. 3 standard South. and No. 2 soft	12 00@12 50
Standard Southern car-wheel.....	18 50@19 25

NEW YORK PRICES.

No. 1 foundry lake ore coke iron.....	\$15 00@15 50
No. 2 foundry lake ore coke iron.....	14 50@15 00
No. 1 American-Scotch.....	16 00@16 25
No. 2 American-Scotch.....	15 00@15 25
No. 1 standard Southern.....	14 00@14 50
No. 2 standard South. and No. 1 soft	12 50@12 75
No. 3 standard South. and No. 2 soft	12 00@12 50
Standard Southern car-wheel.....	18 50@19 25

ROGERS, BROWN & CO.

An Excursion to Georgia.

The Macon (Ga.) Advertising and Information Bureau has taken an important step by arranging an excursion which will start from Richmond, Ind., on February 13. Agents of the bureau are now working in Richmond and vicinity, and it is expected that between 600 and 1000 would-be settlers will take advantage of the special rates and other inducements to come to Macon and see for themselves the advantages Georgia offers to home-seekers. The Indiana papers are freely noticing the movement and giving it a liberal advertisement. The eagerness of the people to know about the South and the readiness with which they agree to join the excursion party surprises even those at the head of the bureau.

Working Convicts on Plantations.

Representative Potter has introduced a bill into the Mississippi legislature to remove the State penitentiary from Jackson and place the convicts on a State farm. The penitentiary board of control has already decided to work the Marcellus plantation, in Holmes county, owned by James Richardson, on shares. There are 2500 acres in the tract. The board thinks there will be enough State convicts that cannot be leased to work most of it. The board is to feed and clothe the convicts, furnish guards and medical attention, and Richardson is to furnish the teams, feed for same, lands, etc. The proceeds are to be equally divided.

A DISPATCH from Huntsville, Ala., says: "As soon as the houses can be erected for the additional operatives, the West Huntsville Cotton Co. will work its mill double time, both day and night, thus employing a double force of hands, which is rendered necessary to enable the factory to meet the orders for its product, which is in such demand as to require this movement. There could certainly be no stronger evidence of the adaptability of this locality for the successful operation of cotton mills of all kinds. All three of the factories have never stopped, but worked on full time, and have always returned large dividends on the capital invested in them, the net profit having been over 25 per cent." This plant is one of the new mills of the South, it having been completed and started in operation last year. The equipment contains 5200 spindles.

The Anniston Cordage Co., of Anniston, Ala., has just put in two new webbing looms, purchased from a Philadelphia firm. The business of this plant continues to increase and the outlook for the future is very encouraging. One loom had been running, but it was unable to supply the demand for back-bands, and now the three looms will be run on that product for ninety days.

THE Eufaula Cotton Mills, of Eufaula, Ala., manufacturers of brown sheetings, shirtings and drills, have declared a semi-annual dividend of 3½ per cent. and added \$2500 to the surplus fund. This plant has 6528 spindles and 224 looms. *J. W. Fullis is president, and N. W. Roberts, secretary and treasurer.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 374 and 375.]

Newberry Mills to Enlarge.

The board of directors of the Newberry Cotton Mills, of Newberry, S. C., held a meeting last week and declared a semi-annual dividend of 4 per cent. The directors decided to commence work on the proposed new building in the spring, and the number of additional spindles to be added was fixed upon as 15,000. These extensions were really decided at the tenth annual meeting of the stockholders, which was held last May, but not until last week was the official action of the directors taken. The capital stock of the company, which is now at \$250,000, has been increased to \$400,000, and 35 per cent. of it, or \$52,500, must be paid by July 1. The present stockholders will, of course, have the first privileges of taking the new issue. Contract for the foundation for the new building will be let in a few days, and it is expected that the entire improvements will be completed and the new machinery in operation before 1895. The present plant has 10,000 spindles and 350 looms in operation. The product is sheetings, shirtings and drills, and the mill is in charge of Superintendent Jefferson Higgins. Mr. R. L. McCaughrin is vice-president, and T. J. McCrary, treasurer and general manager.

Enlargement of the Anniston Mill.

Extensive improvements have been decided on for the cotton mill of the Anniston Manufacturing Co., at Anniston, Ala., and preparations for commencing work have already commenced. A new building two stories high, 44x110 feet in size, will be erected, and is to be used principally for picker-rooms, and the picker-rooms in the old building are to be equipped with new cotton machinery of other kinds. It is the intention of the company to thoroughly overhaul the entire plant, repairing or buying new machinery wherever necessary. The cost of the proposed improvements is estimated at \$50,000. Mr. J. B. Goodwin, treasurer of the company, was to start for the North and East a few days ago, where he will examine the machinery for cotton manufacturing. The present mill has 11,400 spindles, and its production has been brown sheetings, shirtings and drills. Mr. A. L. Tyler is president of the company.

A New Cotton Mill for South Carolina.

South Carolina will soon have another cotton mill. Mr. F. E. Henderson, of Aiken, S. C., and associates have sold to Charles Estes, president of the King Mill, at Augusta, and to Mr. Thomas Barrett, president of the Langley (S. C.) Manufacturing Co., a one-fifth interest in the old Bath Paper Mill, at Bath, S. C., as lately mentioned in the MANUFACTURERS' RECORD. These parties have organized a company with a capital stock of \$300,000, with privilege of increasing to \$1,000,000. It was at first intended to remodel the paper-mill building, but it has now been decided that it will be entirely torn down and a new modern building with all the latest machinery put in to spin 28s to 40s yarns. The capacity of the mill at the start is to be 15,000 spindles.

Southern Textile Notes.

THE new cotton mill at China Grove, N. C., built by the Patterson Manufacturing Co., will be put in operation very soon. J. W. Cannon, of Concord, is president of the company.

A NEW dry goods commission house has been established in Baltimore under the name of Erwin, Drewry & Co. to handle Southern cotton goods. Mr. Erwin has

had long connection with North Carolina cotton mills, and Mr. Drewry has an extensive business acquaintance with merchants in the South, and the combination ought to prove very successful in building up a large business.

THE Anchor Woolen Mills, of Fort Worth, Texas, lately noted as to be reopened, will put in a new sixty-five horsepower boiler and engine and thoroughly overhaul and repair the old machinery, which is said to be in good condition. The plant is a full two-set mill and will start up on blankets, jeans, tweeds, flannels and stocking yarn. S. Ensey is manager.

THE Rock Hill (S. C.) Cotton Factory Co. has contracted with the Charlotte (N. C.) Machine Co. for 192 Stafford looms, which will be put in at once. The president of the mill company, Mr. A. E. Hutchinson, arranged for this improvement, and it is thought that the plant will be put on finer numbers, to make print cloths. The present equipment consists of 5000 spindles, which have been running on cotton yarns and warps, under the superintendence of J. R. Neisler.

THE Chesapeake Knitting Mills held their annual meeting of stockholders at Norfolk, Va., last week and the following officers were elected: E. M. Tilly, president; Alvah M. Martin, vice-president, and Foster Black, secretary and treasurer. The directors chosen were D. Lowenberg, C. G. Ramsey, Thomas Black, William Sloane and George G. Martin.

THE annual meeting of the directors of the Columbia Manufacturing Co., of Ramseur, N. C., was held last week. Mr. J. S. Spencer, of Charlotte, was re-elected president, and W. H. Watkins, secretary and treasurer. This company's mill runs on yarns and is operating 4340 spindles under the superintendence of W. E. Capel.

ELECTRIC-LIGHTING plants are to be installed in the mills of the Chatham Manufacturing Co. and the Elkin Manufacturing Co., both at Elkin, N. C. Contract has been let to D. A. Tompkins Co., of Charlotte.

THE Statesville Cotton Mill Co., which was organized last spring to build a mill, held its annual meeting at Statesville, N. C., on Monday last. Mr. D. A. Tompkins, of Charlotte; J. W. Capeland, B. F. Long, T. D. Miller and others are interested.

MR. JOHN W. DICKEY, of Augusta, Ga., writes to the MANUFACTURERS' RECORD: "Originally nearly all our cotton mills were constructed by the aid of Northern capital, but gradually the stocks of the various enterprises have drifted back home, until today there is not over one-tenth (average) of these stocks owned by Northern people. The institution among them all which all Augustans mention with especial pride on account of its being one of the oldest, and more especially on account of the wonderful success it has attained under the management of Mr. H. H. Hickman, who has been president since 1867, is the Graniteville Manufacturing Co. This company is capitalized at \$600,000, and besides paying 10 per cent. dividends for twenty-seven years—during which time it failed to pay only two or three dividends—it has built from its earnings another mill, the Vaucluse, at a cost of \$362,000, besides accumulating a cash surplus to March 1, 1893, of \$322,520. The Vaucluse mill for many years has earned a sum sufficient to pay 7 per cent. dividends on the entire stock of the company, leaving the bulk of the earnings of the larger mill, the Graniteville proper, to be applied to improvements and adding to the surplus. The company owns its own water-power and operatives' houses, besides 13,000 acres of land. The number of spindles is about 35,000; the number of looms, 959. It is difficult at all times to buy stock in this institution; sales, when made, vary from 145 to 155.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Cotton Mill.—The Anniston Manufacturing Co. has decided to expend \$50,000 in improvements to its cotton mill. A new building will be erected for picker-room and considerable new machinery will be put in.

Anniston—Additional Machinery.—The Anniston Cordage Co. is putting two new webbing looms in its factory.

Bessemer—Rolling Mill.—The report mentioned in last week's issue of the MANUFACTURERS' RECORD that New York and Nashville parties had leased the Bessemer Rolling Mill is not true, so we are informed by M. J. Adler, of Birmingham, who is the principal owner of the plant.

Bessemer—Iron Furnace.—The Tennessee Coal, Iron & Railroad Co. is relining two of its Bessemer furnaces, and it is said they will soon resume operations.

Birmingham—Iron Furnace.—The Sloss Iron & Steel Co. is reported as to put another furnace in blast very soon.

Birmingham—Rolling Mill.—A committee of Birmingham's citizens, headed by the mayor, has gone to Louisville, Ky., to confer with James G. Caldwell, president of the Birmingham Rolling Mill Co., relative to the resumption of operations at the rolling mill. The action of the city council last week relieved the plant of city taxation, and it is confidently believed that operations will soon be resumed. A dispatch from the committee says that prospects of resumption are favorable.

Birmingham—Broom Factory.—Legrand & Hamilton have established a broom factory.

Bridgeport—Stove Works.—Lowman Bros. have found it necessary on account of increasing business to enlarge their facilities for making stoves, and, with the latter end in view, a company is now being organized to purchase the plant. It is said that all the stock to the new concern has already been subscribed.

Coalburg—Washing Plants.—It is said that the Sloss Iron & Steel Co., of Birmingham, is arranging to erect three big coal washers at its different mines. The mines are at Coalburg, Brookside, Cardiff and Blossburg.

Ensley—Iron Furnace.—It is said that the Tennessee Coal, Iron & Railroad Co. will soon put in blast again its Ensley furnace, now being relined.

Florence—Barrel and Stave Factory.—It is said that Mr. Moore, of Philadelphia, the Cherry Cotton Mills contractor, will build a barrel and stave factory on Sweetwater creek, a mile from Florence.

Huntsville—Cotton Mill.—The West Huntsville Cotton Mill will work double time, thus doubling its output.

Mobile—Turpentine Still, etc.—R. W. Southerland and C. E. Pearce, of Savannah, Ga., representing McMillan Bros., of Savannah, Ga., and Fayetteville, N. C., will establish a turpentine still and manufacturing plant in Mobile. McMillan Bros. are copper-smiths.

Montgomery—Handle and Spoke Factory.—W. R. Caldwell is heading a movement for the formation of a company to establish a handle and spoke factory. The plant is now located at Alexander City and the owners have decided to remove it.

Montgomery—Basket and Woodenware Works.—A plant is reported as to be established under the name of the Montgomery Basket and Woodenware Works with a capital stock of \$20,000. It is said that 150 men will be employed. W. H. Micon,

Jr., who is interested, can probably give information.

Opelika—Telephone System.—A telephone system will be constructed and equipped at once. G. A. Lyons can give information.

Opelika—Electric-light Plant.—The Opelika Electric Light & Power Co. will put in a new 100 horse-power incandescent electric-light plant in addition to its present works. Machinery has all been purchased, and by February 15 the new plant will be installed.

Russellville—Iron Mines.—L. R. Perkins has reopened his ore mines after an idleness of several months and will employ a large force of men, turning out four carloads of ore daily. Mr. Perkins has stated that he has arranged to place the ore with the North Alabama furnace at Florence.

ARKANSAS.

Arkansas City—Levee Contracts.—Terrell & Watkins, of Beulah, Miss., have been awarded contracts for levee work on the Red Fork loop of the Arkansas river at ten cents per yard.

Helena—Box Factory.—A company has been incorporated with a capital stock of \$10,000 and will operate a box factory, already secured. J. J. Hornor is president; Jacob Trieber, vice-president, and S. H. Hornor, secretary and treasurer.

Helena—Saw Mill.—The Schutte Lumber Co., reported in the last issue of the MANUFACTURERS' RECORD as incorporated, has purchased the Moline mill and has it in operation. It is stated that the plant is to be greatly enlarged and new machinery added.

Little Rock—Planing Mill.—The Richardson-Rutherford Co. will rebuild its planing mill, reported as burned. The new plant will be much larger than the old one and will be equipped throughout with the latest improved machinery. Rickon & Thompson, architects, are preparing plans for the new building.

Magnolia—Electric-light Plant and Ice Factory.—The Magnolia Manufacturing & Supply Co. will put in an ice plant and an electric-light plant, and probably water works.

Pine Bluff—Furniture Factory.—A furniture company of Union City, Tenn., (J. H. Newman, manager,) has made the citizens of Pine Bluff a proposition to erect a furniture factory.

Yocum—Flour Mill.—Rhodes & Massey will erect a 50-barrel flour mill and contract for the machinery has been awarded.

FLORIDA.

Brooklyn—Ice Factory.—A rumor is current that several Jacksonville parties intend to erect a large ice factory in Brooklyn.

Daytona—Fibre Factory.—It is said that a fibre factory will probably be built. If there is any truth in the report, Bishop & Fawcett can give information.

Early Bird—Phosphate Plant.—The Illinois Phosphate Co. will erect another large phosphate plant, consisting of patent steel log-washers, engines, boilers, screens, conveyors, etc. Contract has been awarded to McLanahan & Stone, of Hollidaysburg, Pa.

Hilliard—Saw Mill.—The Georgia & Florida Investment Co. is erecting a saw mill of 15,000 feet daily capacity at Hilliards, on the Carrabelle, Tallahassee & Georgia Railroad, just above Crawfordville, Ga.

Jacksonville—Cold-storage Plant.—W. P. Sumner has put in a new cold-storage plant, consisting of a special machine to produce artificial cold, or refrigerating without the use of ice.

St. Andrews—Repair Works.—Josiah Hutchins will erect a blacksmith and repair shop.

GEORGIA.

Atlanta—Furniture Factory.—The Ware Furniture Co. and the Manning Furniture Co., manufacturers of furniture, have consolidated, and will continue to transact business as the New Ware Furniture Co. The capital stock is placed at \$100,000.

Augusta—Canning Factory.—Endeavors are being made by Frank W. Hulse to secure the establishment of a canning factory.

Augusta—Car Works.—The Young Men's Business League has plans on foot for the establishment of a plant to manufacture freight cars.

Brunswick—Land Improvement.—The Everett Land Co. has applied for charter, and its purpose is to improve a tract of land in Wayne county and establish a town.

Cherokee County—Gold-mining Plant.—The Creighton Mining & Milling Co. has let contract for the erection of a complete 10-stamp gold mill and a chlorinator plant of five tons daily capacity. Precise address of company not known, but letters to Canton, Ga., will probably reach it.

Demorest—Asbestos Mines.—It is reported that large quantities of asbestos are being mined near Demorest by a company which is also erecting a new plant for working up the stone.

Fort Valley—Cement Works.—The Georgia Cement Co. has been organized with A. S. Giles, president; John Mitchell, vice-president, and W. E. Matthews, secretary and treasurer. Cement works will be established.

Georgia—Saw Mills.—The Suwanee Canal Co. will, upon the completion of work on the canal, erect several large saw-mill plants on St. Mary's river. Capt. Henry Jackson, president of the company, can probably be reached at Atlanta.

Macon—Sewerage System.—The plans and specifications for Macon's sewerage system now being prepared by S. M. Gray, of Providence, R. I., will be completed by January 10, and by the 15th bids will be asked for the construction of same. The amount to be expended is between \$125,000 and \$200,000.

Newnan—Trunk Factory.—Bexley & Windham have lately established a trunk factory.

Quitman—Electric-light Plant and Water Works.—The city has voted an issuance of bonds for \$20,000 for the purpose of constructing a water works system and erecting an electric-light plant. The mayor can give information.

Summerville—Flour Mill.—F. L. McGinnis, of La Fayette, is endeavoring to organize a stock company for the purpose of erecting a flour mill in Summerville.

Tallapoosa—Dynamite Works.—The Southern Dynamite & Powder Co. expects to enlarge its works before a great while.

KENTUCKY.

Danville—Water Works.—The construction of a water-works system is contemplated, and Mr. Morgan, an engineer from Chicago, is on the ground making plans and specifications. The cost of a plant is estimated at \$65,000. For further information address the mayor.

Frankfort—Ice Factory.—The Capital City Railway Co. is negotiating for machinery for the manufacture of ice and will have a plant in operation within sixty days.

Franklin—New Machinery.—C. G. Stanfield is putting a new steam plant in his flour mill, consisting of a Lane & Bodley seventy-five horse-power Corliss engine and a 100 horse-power boiler.

Hopkinsville—Water Works.—The Hopkinsville Water, Light & Power Co. will build water works in the spring.

Lexington—Water Works.—The city is negotiating with engineers for plans for a water-works system. For information address S. C. Campbell, chairman of committee.

Lexington—Canning Factory.—A canning company is now being organized in Lexington and most of the stock is said to have been subscribed. The secretary of the Chamber of Commerce can give information.

Lexington—Canning Factory.—A plan is afoot for the organization of a stock company to erect a canning factory. Secretary Chamber of Commerce can give information.

Owensboro—Distillery.—J. W. McCullough has completed a new distillery near Owensboro. Its mashing capacity daily is 300 bushels of corn.

LOUISIANA.

New Orleans—Levee Contracts.—R. M. Quigley & Co., of St. Louis, Mo., have been awarded contracts for levee work in the Pontchartrain district. Bonne Carre parish contract was let at seventy-five cents per yard, St. John parish at thirty-five cents and Jefferson parish at thirty-eight cents.

Shreveport—Woodworking Factory.—H. H. Wheelless, F. T. Whitehead, J. D. Pace, W. T. White and J. M. Augers have incorporated the Shreveport Manufacturing Co. for the purpose of manufacturing patent articles of wood and metal. The capital stock is \$50,000, \$30,000 of which has been subscribed.

MARYLAND.

Aberdeen—Water Works.—The town, contemplating constructing a water-works system, and the commissioners have been procuring estimates on the probable cost of pumping water from Swan creek. The proposed plant would cost about \$12,000. For further particulars address the clerk to town commissioners.

Annapolis—Gas or Electric-light Plant.—The city council has ordered advertisements for proposals to light the city with gas or electricity, and to erect a plant. The mayor can be addressed for information.

Baltimore—Electric-light and Power Plant.—James McEvoy, William Lanahan, John A. Worley, William S. Paca and John Paca have incorporated the Suburban Electric Light & Power Co. for the

purpose of furnishing light, heat and power. The capital stock is placed at \$20,000.

Warrenton, D. C.—Car-fender Company.—A. B. Ross, of Chicago, Ill., and others have incorporated the Ross Fender Co. for the purpose of furnishing electric, cable and other cars with safety fenders. The capital stock is \$250,000.

MISSISSIPPI.

Jackson—Manufacturing Electrical Goods.—A. P. Weaver, W. Watson and others have incorporated the Weaver Electrical Co to manufacture electrical and telegraph instruments. The capital stock is \$20,000.

MISSOURI.

Joplin—Machine Shops.—The citizens have held a public meeting and adopted a plan to secure for Joplin the establishment of the Kansas City, Pittsburg & Gulf Railroad's shops. O. H. Picher, chairman of committee, can be addressed for information.

Joplin—Brewery.—Lawrence Wagner, Conrad Wagner, Henry Wagner and C. W. Walther, all of Jefferson City, have purchased the Joplin brewery for \$28,000 cash. A new company with a large capital stock will be organized to improve and operate the plant. It is their intention that new buildings be erected, entire new outfit of machinery put in, and, in fact, have the plant practically rebuilt, with its present capacity trebled.

Kansas City—Printing-ink Works.—Patrick Fennelly, Ella Hammerslough and Freda Hammerslough have incorporated the Midland Printing Ink Works Co. with a capital stock of \$2000. The company will manufacture and sell printing inks.

Mexico—Brick Works.—A. M. Harrison intends to increase the output of his brick works, and will put in machinery for making pressed bricks.

Mexico—Coal Mine.—J. W. Ritenour is said to have struck a paying vein of coal on his farm, one and a-half miles from Mexico.

St. Louis—Supply Company.—David F. Kamie, George F. Dietrick, William H. Barre and Lyman B. Ripley have incorporated the Ripley-Dietrick Supply Co. with a capital stock of \$75,000.

St. Louis—Grain Company.—David Carlisle, H. H. Carrington and David Carlisle, Jr., have incorporated the Rosedale Hay & Grain Co. with a capital stock of \$10,000.

St. Louis—Mercantile.—Isaac Archshoefer, Rose Archshoefer and Herman Adler have incorporated the Bremen Grocery Co. with a capital of \$2500.

St. Louis—Feed Company.—Adolph Kolb, L. E. Deffaa and E. H. Deffaa have incorporated the Southern Feed Co. with a capital stock of \$10,000.

St. Louis—Commission.—William O. Andrews, William H. Danforth and George R. Robinson have incorporated the Robinson-Danforth Commission Co. with a capital stock of \$12,000.

St. Louis—Construction Company.—Edward G. King, William J. King and William B. Brown have incorporated the King Granitoid Construction Co. with a capital stock of \$2100.

NORTH CAROLINA.

Elkin—Electric-light Plant.—The Chatham Manufacturing Co. will put an electric-light plant in its cotton mill. Contract has been let.

Elkin—Electric-light Plant.—The Elkin Manufacturing Co. will put an electric-light plant in its cotton mill. Contract has been let.

Tar River—Coupler Works.—J. L. Adcock has the intention of forming a company to manufacture a car coupler which he has invented.

Weldon—Cotton Mills.—A report from Weldon states that the Great Falls Co. has sold a half-interest in its canal to a Northern syndicate of large capital that proposes erecting two large mills at once. Cotton mills are doubtless the kind intended.

Winston—Tobacco Factory.—G. T. Brown and R. L. Williamson have formed a partnership and will establish a factory for making plug, twist and other tobaccos.

SOUTH CAROLINA.

Aiken—Cotton Mill.—A report is again current that E. B. Henderson, who lately purchased the Bath Paper Mills, of Aiken county, will at an early date convert the property into a cotton mill or other manufacturing plant. Charles Estes and Thomas Barrett, both of Augusta, Ga., are interested in the project.

Bath—Cotton Mill.—Charles Estes and Thomas Barrett, both of Augusta, Ga., have each purchased a one fifth interest in the Bath Paper Mill which was recently bought by F. E. Henderson, of Aiken, S. C. The parties have applied for incorporation papers and will at once organize a company to erect a 15,000 spindle cotton mill on the site of the old paper mill, to be run by water-power. The capital stock is to be \$30,000.

Blacksburg—Phosphate Works.—A charter has

been granted to the Blacksburg Phosphate & Guano Co., with a capital stock of \$100,000. The incorporators are T. B. Gautir, D. C. Ebaugh and John F. Jones. The company will build phosphate works.

Charleston.—A charter has been granted to the Thomas P. Smith-McIver Co., with T. P. Smith, president, and G. W. McIver, secretary and treasurer.

Florence—Cotton-oil Mill.—Smilie A. Gregg, John McSween and W. W. Hursey have incorporated the Florence Cotton Oil Mill Co.

Newberry—Cotton-mill Enlargement.—The directors of the Newberry Cotton Mills have decided to increase the company's capital stock by \$150,000 to pay for the extension now being built and the machinery which is to be added.

Rock Hill—Cotton Mill.—The Rock Hill Cotton Factory Co. will put in its mill 192 additional looms, and contract for them has been awarded.

Walhalla—Publishing.—The Oconee News Co. has been incorporated for publishing purposes, with a capital of \$1,500. N. W. McCauley is president; J. A. Johns, vice-president, and A. P. Crisp, secretary and treasurer.

TENNESSEE.

Arlington—Lumber Company.—E. B. Henry, E. M. Baker, James Halloway, John Gaston and J. W. Drummond have incorporated the Arlington Lumber Co. of Knox County. Arlington is doubtless the company's address.

Calhoun—Flour Mill.—G. W. Saulpaw will erect a 30-barrel flour mill. Contract for machinery has been awarded.

Friendsville—Canning Factory.—T. R. Lee, J. F. Beal, Francis Hackney, J. J. Herron, Samuel Dunlap and others have incorporated the Friendsville Canning & Manufacturing Co. The company proposes to can berries, corn, vegetables, etc.

Nashville—Ice Factory.—The Nashville Ice Factory was sold at public auction on December 13, 1893, by order of the stockholders, in order to go out of business, and was bought by the bondholders of the company for about \$30,000, thus realizing enough to pay all debts. The bondholders reorganized under the name of the Nashville Ice Co., with the following board of directors: W. A. Atchison, S. L. Demoville, Jno. R. Sneed, H. Metz, M. B. Toney, R. H. Gordon and Wm. Porter. W. A. Atchison, the president of the old company, was elected president; S. L. Demoville, vice-president, and R. H. Gordon, secretary. The capital stock has not yet been determined.

Rockwood—Iron Furnace.—The Roane Iron Co. has completed its new furnace, and it was put in blast last week. The furnace has a daily capacity of 100 tons of pig iron, and the entire plant will shortly, it is said, be put in operation.

TEXAS.

Austin—Brewery.—Business men of Austin have a movement afoot to organize a company to erect a brewery. The secretary Board of Trade can give information.

Baird—Water Works.—The city contemplates constructing a water-works system, and J. S. Thatcher, a civil engineer of Dallas, has been employed to investigate the matter, survey location, etc. For further information address the mayor.

Beaumont—Flour Mill.—D. Boaz, of Fort Worth, contemplates erecting a flour mill in Beaumont, and is at present investigating.

Galveston—Chemical Works.—J. Stoddart writes the MANUFACTURERS' RECORD that a California syndicate has inaugurated in Galveston a chemical works with ample capital for the purpose of extracting opiates from lettuce.

Galveston—Rice Mill.—The rice mill reported last fall as to be built by the Texas Star Flour Mills will have a capacity of 100 barrels in ten hours, but the machinery is intended for a 200-barrel plant, and the three hullers will increase the capacity to 200 barrels.

Galveston—Pipe Works.—Isaac Heffron, George H. Henchman and M. T. Sherwood have incorporated the Galveston Cement Pipe Works with a capital stock of \$20,000.

Hempstead—Cold-storage Plant.—The Magnolia Brewing Co., of Houston, will erect a cold-storage building and icehouse in Hempstead.

Orange—Saw Mill.—It is said that another company is being organized to erect a saw mill. The sum of \$36,000 is stated to have been subscribed.

San Antonio—Publishing.—James Anderson, H. E. Hildebrand, S. B. Wood, J. V. Spring, L. M. McGhee, J. C. Breeding and W. W. Wilson have incorporated the San Antonio Publishing Co. with a capital of \$20,000.

Texarkana—Saw and Planing Mill.—The Central Coal & Coke Co. is erecting a saw mill of 150,000 feet daily capacity, a planing mill of 200,000 feet capacity and two dry-kilns of 200,000 feet capacity. J. W. Ammerman will manage the plant. This company was organized last year with a capital stock of \$3,000,000. R. H. Keith is president, and A. E. Stilwell, first vice-president.

VIRGINIA.

Alexandria—Car-coupler Company.—The Brown Automatic Car Coupler Co. has been incorporated for the purpose of controlling and manufacturing car couplers under letters patent. A. H. Semmes is president; P. C. Brown, vice-president; T. W. Bedford, secretary and treasurer; R. W. Avery and Reginald Fendall, directors. The capital stock is \$100,000. Jno. S. Beach is said to be local agent.

Alexandria—Publishing.—The Inventive Age Co. has been incorporated with a capital stock of \$50,000 for general publishing purposes. M. H. Jewett, of Bismark, S. D., is president. Jno. S. Beach is said to be local agent.

Chatham Hill—Flour Mill.—John M. Gwyn intends to erect a roller flour mill in the spring.

Greenville—Iron Mines, etc.—E. F. Zinn, of Milwaukee, Wis., who has been reported by the general press as having purchased the Bare ore bank, near Greenville, and the incomplete furnace at Basic City, writes to the MANUFACTURERS' RECORD that he has not perfected the purchase of the properties in question, but that negotiations are still pending.

Marganna—Woodworking Plant.—The Powhatan Land & Mining Co. intends to put in a plant for manufacturing hardwood lumber, wagon material, etc.

Mineral City—Pyrites Mine.—The Lett Copper Mine Co. has been incorporated for the purpose of developing a pyrites mine near Mineral City. The incorporators are William F. Lett, Frederick R. Lett, Louis J. McKenny, William F. Lett, Jr., and M. M. Lett, all of New York. The capital stock is \$200,000.

Norfolk—Paper Company.—A charter has been granted to the Old Dominion Paper Co., its purpose being to conduct a paper business. The capital stock is not less than \$25,000 nor more than \$50,000. Robert Johnston is president and general manager; William F. Robertson, secretary and treasurer, and, together with H. R. Dupuy, they are the directors.

Portsmouth—Sewerage.—A bill has been introduced in the legislature to authorize the city of Portsmouth to issue bonds for sewerage and other purposes to an amount not exceeding \$165,000. For information address the mayor.

Richmond—Mercantile.—The Robert F. Williams Co. has been incorporated to conduct a wholesale grocery and commission business. John W. Harrison is president; T. Letcher Stone, secretary and treasurer, and, together with Robert F. Williams, Jr., J. R. V. Daniel and Harry L. Stone, compose the directors. The capital stock is placed at not less than \$25,000 nor more than \$50,000.

West Norfolk—Drawbridge.—A bill has been introduced in the State legislature to incorporate the West Norfolk & Port Norfolk Drawbridge Co. for the purpose of building and maintaining a drawbridge over the Elizabeth river between West Norfolk and Port Norfolk. The capital stock is to be not less than \$500 nor more than \$25,000. The incorporators are R. E. B. Stewart, W. L. Wise and M. W. Dennis, of Norfolk county; M. D. Eastwood, John M. Hume, W. M. White, J. G. Edwards and J. S. Crawford, of Portsmouth, and Andrew Wise, of Florida.

WEST VIRGINIA.

Charleston—Electric-light Plant.—An ordinance has been introduced in the city council providing for the issuing of bonds to the amount of \$20,000 by the city for the purpose of erecting and operating its own electric-light plant. The mayor can give information.

Fairmont—Coal Lands.—James Hair and C. W. Swisher are reported as taking up options on coal land in Marion and Harrison counties. Mr. Hair's options, which are said to be in the name of J. M. Guffy & Co., of Pittsburg, Pa., include one tract of land containing 26,742 acres. Mr. Swisher is said to have a 2000-acre tract on Ten-Mile creek, which he is taking up. The positive address of these parties is not known, but they may be reached at Fairmont.

Huntington—Oil-field Developments.—C. F. Cole and A. B. S. Wilder, who have purchased large tracts of land in Wayne and Cabell counties, intend to institute developments for boring oil wells.

BURNED.

Attalla, Ala.—White & Chisolm's and W. P. Shahn's stores; loss estimate \$12,000.

Bryan, Texas.—M. Bonnerville's residence; loss \$10,000.

Carthage, N. C.—A. W. Cagle's distillery.

Fredericksburg, Va.—Shimp & Reist's wood-working factory; partially insured.

Handsom's Depot, Va.—J. T. Bradshaw's saw mill damaged by boiler explosion.

Hope Mills, N. C.—Johnson & Potter's distillery.

Lamar, Ark.—The Ewing Seminary; loss \$5000.

Little Rock, Ark.—The Richardson-Rutherford Co.'s planing mill; loss on machinery \$30,000; partially insured.

Minden, La.—Stores of J. F. Hill & Co., J. V. Webb and J. R. Miller.

Ridgeway, Va.—Three warehouses and two stores; loss \$20,000.

BUILDING NOTES.

Atlanta, Ga.—Sanitarium.—Contracts have been partially let for building a sanitarium to cost \$37,000. It will be four stories high and built of marble and pressed brick. S. L. Patton, of Chattanooga, is architect.

Atlanta, Ga.—Hotel Improvement.—It is stated that an addition of 100 rooms will be made to the Hotel Aragon. Address the Aragon Hotel Co.

Bainbridge, Ga.—Jail.—No contracts have as yet been let for the jail it is proposed to build. Address Sheriff Patterson.

Baltimore, Md.—Courthouse.—The consulting architect of the proposed \$2,000,000 courthouse announces that plans, etc., will be received until April 9. All architects may compete. It is to be 199x327 feet and to contain 80,000 square feet of floor space divided into 140 apartments. White granite or marble is the material preferred. Courthouse commission, City Hall, Baltimore, may be addressed.

Baltimore, Md.—Temple.—The foundations are being prepared for the Jewish temple to be erected by Har Sinai congregation at a cost of \$50,000. Rev. Tobias Schanfarber is rabbi of the congregation.

Baltimore, Md.—Bank Addition.—The Mercantile Trust & Safe Deposit Co. will build brick and stone addition to its present building 30x100 feet to contain bank offices and a large storage vault. The roof and floors will be supported by steel framework and the ceiling will be metal. John Gill is president of the company, and J. E. Sperry, architect.

Baltimore, Md.—Hospital Improvement.—The Maryland Homoeopathic Hospital directors have purchased a building and will enlarge and remodel it for hospital purposes at a cost of \$10,000. F. W. Schultz or L. Z. Condon may be addressed.

Bryan, Texas—Storehouses.—It is stated that Messrs. Tabor and Hartman will erect three buildings of corrugated iron for storehouses to replace ones recently burned.

California, Ky.—Church.—M. Peacler is contractor for the church to be built in place of the edifice recently burned. It will cost \$2000.

Charleston, S. C.—Opera-house.—L. Arthur O'Neil states that the O'Neil Grand Opera-house, recently burned, will be positively rebuilt.

Charlotte, N. C.—Warehouse.—Anthony & Young will erect a warehouse of corrugated iron 30x80 feet.

Charleston, S. C.—Hotel.—J. A. Wood, of New York, has prepared plans for a hotel to cost \$300,000 and a company is to be organized to construct it. The hotel is proposed to be built of brick and artificial stone with steel beams and to be fire-proof. F. W. Wagener, W. M. Bird and D. H. Chamberlain are interested.

Denton, Texas—College.—Citizens are raising funds to build a college to cost 10,000. Mayor Poe is interested.

Fort Worth, Texas—Hotel.—Plans have been drawn by Paul J. Lietz, of Chicago, for the hotel it is proposed to build in Fort Worth to cost \$300,000. The plans are for a building of terra cotta, with steel beams, to contain 195 rooms. It is to be five stories high. McLean & Mudge, of Fort Worth, are interested.

Fort Worth, Texas—Freight Depot.—The Chicago, Rock Island & Texas Railroad Co. will build a stone freight depot 35x150 feet. Chief Engineer Parker may be addressed.

Hagerstown, Md.—City Hall.—The city council is considering the question of building a city hall to cost \$10,000.

Lampasas, Texas—School.—The corporation has decided to build a school to cost \$25,000. Address Mayor Maddox.

Lynchburg, Va.—Asylum.—John D. Langhorne will enlarge and remodel the Masonic Home building. He has purchased it.

Macon, Ga.—Hospital.—A site has been selected for the proposed hospital and it is expected work on the building will begin before February 15.

Marietta, Ga.—School.—The corporation has decided to issue bonds to erect a school building. Address the mayor.

Memphis, Tenn.—Bank.—The Continental Bank will remodel a building recently purchased for banking offices, vaults, etc. Address J. C. Neely, president.

Milledgeville, Ga.—College.—It is stated that arrangements are being made to rebuild the Middle Georgia Agricultural College recently burned. Address the board of trustees.

Newberry, S. C.—College Building.—The Newberry College trustees will erect a brick building for a hall to cost \$5000. It will have a bell tower.

San Antonio, Texas—College.—Work has begun on the main building of the St. Louis College

which is to cost complete about \$200,000. Address Bishop J. C. Neraz.

Silver Run, Md.—Church.—The congregation of St. Mary's Lutheran Church will build a new edifice of stone. The pastor will give information.

St. Augustine, Fla.—Courthouse.—A site has been selected for the courthouse it is proposed to erect by St. John's county. Address the board of commissioners.

St. Louis, Mo.—Church.—The Lafayette Park Mission will have plans prepared for building a new church. Address Rev. O. A. Bartholomew.

St. Petersburg, Fla.—School.—Contract for the proposed \$5000 schoolhouse has been let to David Ferdon.

Tallahassee, Ga.—Depots.—W. A. Anderson, of Brunswick, Ga., will build seven depots for the Carrabelle, Tallahassee & Georgia Railroad Co.; also four sets of section-houses.

Washington, D. C.—Apartment-house.—Architect T. F. Schneider will make plans for a six-story apartment house to be built at an early date in the northwest section of the city. It will be of buff and red brick and will contain, it is reported, 100 rooms.

Washington, D. C.—Dwellings.—Architect George S. Cooper is preparing plans for a row of twenty-two dwellings that Baner & Simpson will erect in Le Droit Park. They will be two stories high with brick fronts and stone trimmings. The cost will be \$55,000.

Washington, D. C.—Hotel.—Charles Jacobson has obtained permission to build a hotel five stories high, with pressed-brick front. W. Bruce Gray is architect.

RAILROAD CONSTRUCTION.

Railroads.

Albany, Ga.—Sections of track along the Southwestern Railroad will be relaid with steel rails and the roadbed rebalanced and improved. About 1500 tons of new rails will be used. Address S. D. Aderholt, roadmaster, Savannah.

Avon Park, Fla.—It is stated that arrangements are now being made to provide funds for building the railroad from Avon Park to Haines City through the "frost-proof" section of the State. O. M. Crosby will give information.

Beaumont, Texas.—Work has begun on the seven-mile extension of the Gulf, Beaumont & Kansas City to the Neches river, which includes two miles of trestle work. John H. Kirby is general manager.

Dallas, Texas.—It is announced that the road proposed to be built from Dallas to Palestine is now under contract, and that it is to be 100 miles long. George W. Burkitt, of Palestine, is said to be one of the contractors.

Eagle Pass, Texas.—It is reported that the cooperative colony at Topolobampo, Mexico, intends building its projected railroad to Eagle Pass. Albert R. Owen, of New York, is American agent of the colony.

Eatonton, Ga.—The Middle Georgia & Atlantic road, between Macon and Covington, twenty-five miles, has been completed. J. A. Droege, at Eatonton, is superintendent.

Elkton, Md.—David P. Davis and John S. Wirt will be among the incorporators of the Elkton & Southern road. The capital is to be \$110,000 in \$50.00 shares.

Hagerstown, Md.—The Cumberland Valley Electric Railway Co. has obtained a franchise to build an electric road in the city. O. H. Ormsby, Pittsburg, or S. R. Icks, of Altoona, Pa., may be addressed.

Hot Springs, Ark.—Surveys are being made for the proposed Little Rock, Hot Springs & Texas road. J. P. Nelson is chief engineer. It is reported that the actual work of construction is to begin in a few days.

Little Rock, Ark.—The bridge and terminal road to be built by the Little Rock Bridge & Terminal Co. will probably be used by the Little Rock & Memphis system to enter the city. Rudolph Fink is general manager of the latter company.

Lookout Mountain, Tenn.—It is announced that funds have been secured for building the proposed inclined cable railway to the top of Lookout mountain, and that the line will cost \$75,000. M. H. Henderson may be addressed.

Marshall, Texas.—The Texas Pacific is relaying portions of its line to Marshall with 60-pound steel rails. About 100 miles of iron rails will be replaced. L. S. Thorne, Dallas, is superintendent.

New Orleans, La.—The Illinois Central is building a switch two and a-half miles long in the suburbs to a transfer wharf where freight and passengers will be carried across the Mississippi during the construction of the new bridge. Forty miles of the road's bed in the Louisiana lowlands are being raised and regraded. A. Phi-brick is roadmaster at New Orleans.

Norfolk, Va.—A bill has been introduced into the Virginia legislature to incorporate the Portsmouth Construction Co. to construct a railroad

from a point in Nansemond county through Portsmouth. W. T. Wise and A. J. Phillips are incorporators. This is reported to be a projected branch of the Norfolk & Western.

Opelika, Ala.—The Auburn & Opelika Street Railroad Co. has been formed to build an electric line, seven miles long, between the points named. It is estimated the road will cost \$60,000. John T. Cowan is chief engineer at Opelika.

Pikesville, Ky.—Wolf & King, of Duluth, Minn., who have the contract for building the sixty miles of railroad to the coal fields in Eastern Kentucky, state that sub-contracts will be let for the work in about a month. Several bridges will be required.

Richmond, Va.—R. A. Patterson, J. C. Robertson and other capitalists are interested in forming the Virginia Electric Railway Co. to construct lines and power plants in the State.

San Antonio, Texas.—A party of engineers have begun making surveys for the San Antonio & Gulf Shore. William Davis, of San Antonio, may be addressed.

Savannah, Ga.—The court has authorized \$40,000 to be issued to rebuild portions of the Savannah & Tybee Island road. Receiver H. M. Comer will give information.

Statesboro, Ga.—J. M. Woods is surveying a private railway from his turpentine plant to a point on the Savannah, Americus & Montgomery road. It is reported he will begin construction work on it in a short time.

Texarkana, Ark.—It is reported that the Texarkana & Fort Smith (now a branch of the Kansas City, Pittsburg & Gulf) has through its general manager offered to build a spur eight miles long from Texarkana to the Sulphur river. Address F. B. Hubbell at Texarkana.

Street Railways.

Augusta, Ga.—It is reported that the North Augusta Land Co.'s electric railroad is to be built in a few weeks. It is to extend from the city proper to several tracts of property in the suburbs.

Charleston, S. C.—The City Railway Co. wishes a franchise to build an electric line in the city.

Charlottesville, Va.—The Piedmont Construction Co. has been granted a franchise to build an electric road in the city.

Greensboro, N. C.—Thomas Woodroffe and others have made a proposition to build an electric street railway in Greensboro. The city council is considering the matter.

Houston, Texas.—It is reported that the Volks-fest street-car line is to be extended in the suburbs. Alderman Geiselman will give information.

NEW STEAMSHIP.

Savannah, Ga.—The Georgia Central has received authority from the court to procure a new ocean steamship for its line. Receiver H. M. Comer will give information.

MACHINERY WANTED

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

E. T. Whately, superintendent of the Yonah gold mines, noted in the BULLETIN of January 4 as wanting chlorinator, concentrator, gold-crushing mill, furnace and water wheel, should be addressed at Santee, Ga., and not Santee, as reported.

Boilers.—The board of water commissioners of Burlington, N. J., will receive proposals until January 16 for furnishing two 100 horse-power tubular boilers. Address George A. Allinson, superintendent.

Boring and Turning Mill.—Edmund M. Ivens, P. O. Box 66, New Orleans, La., wants to purchase a vertical boring and turning mill of 10-foot swing; second-hand machines wanted.

Cement Machinery.—The Georgia Cement Co., Fort Valley, Ga., will need machinery for manufacturing cement.

Corn-cleaner, Crusher, etc.—The Bridgeport Milling Co., Bridgeport, Ala., will want a corn and cob crusher and a corn cleaner.

Drilling Equipment.—The Du Quoin Iron Works Co., Du Quoin, Ill., wants a good second-hand driller's outfit to drill five-and-five eighth-inch casing to a depth of about 1000 feet.

Dynamos.—W. D. McNaull, Ronceverte, W. Va., wants prices on a fifty arc-light dynamo and on a 500-light sixteen candle-power incandescent dynamo with fifty arc lamps.

Dynamos.—C. W. Ford, 807 Broad street, Chattanooga, Tenn., is in need of dynamos and other electrical goods.

Electric-light Plant.—The Magnolia Manufacturing & Supply Co., Magnolia, Ark., is in the market for an electric-light plant for city of 3000 inhabitants.

Elevator.—The board of public works, Louisville, Ky., will receive sealed proposals on January 16 for one direct-connected electric passenger elevator, not less than 2000 pounds capacity, and speed of 150 feet per minute. For further particulars address J. Henry Hoertz, secretary.

Flour Mill.—John M. Gwyn, Chatham Hill, Va., wants to buy outfit for a roller flour mill of six to ten bushels capacity per hour. Mr. Gwyn also wants information regarding the roller process, water-power, etc.

Flour Mill.—F. L. McGinnis, Box 39, La Fayette, Ga., wants prices on outfit for a flour mill of twenty-five to fifty barrels capacity daily.

Guide Mill.—A nine-inch guide mill with engine. Give full description, number and kind of extra rolls, condition and price f. o. b. cars. Address Guide Mill, care American Manufacturer, Pittsburg, Pa.

Handle Machinery.—Machinery for manufacturing axe-handles, pick-handles and single-trees will be wanted. Address B. B. Waddell, Helena, Ark.

Handle Machinery.—J. H. Walls, Rockville, W. Va., wants handle machinery.

Ice Machine.—The Magnolia Manufacturing & Supply Co., Magnolia, Ark., is in the market for a one-ton per day ice machine.

Locomotive.—W. H. Miller, Seneca, Fla., wants a light locomotive, heavy enough to haul two loaded cars.

Machine Tools.—The Edgar Nelson Foundry Co., Mobile, Ala., wants machine tools, such as lathes, planers, drill presses, punch and shears, etc.

Motors.—C. W. Ford, 807 Broad street, Chattanooga, Tenn., is in need of electric motors and other electrical goods.

Pipe-cutter and Threading.—Edmund M. Ivens, P. O. Box 66, New Orleans, La., wants to purchase a pipe-cutting and threading machine to cut and thread from two-inch up to 12-inch pipe, inclusive; second hand machines wanted.

Piping.—The Magnolia Manufacturing & Supply Co., Magnolia, Ark., wants a lot of piping for water works.

Rails.—W. H. Miller, Seneca, Fla., wants five miles of good second-hand light rails of twenty-five or thirty pounds.

Rails.—W. S. Lewis, Charleston, W. Va., wants to buy about five miles of 20-pound steel rails (second hand).

Stapling Machine.—C. C. Benjamin, 325 West Ninth street, Chattanooga, Tenn., wants prices on a foot-power machine for stapling butter dishes.

Stave and Spoke Machinery.—J. H. Walls, Rockville, W. Va., wants stave and spoke machinery.

Wire.—W. D. McNaull, Ronceverte, W. Va., wants prices on about thirteen miles of wire for electric lamps.

Wood-working Machinery.—Machinery for manufacturing bungs will be wanted. Address B. B. Waddell, Helena, Ark.

Woodworking Machinery.—The Powhatan Land & Mining Co., Marganna, Va., wants prices on machinery for manufacturing hardwood lumber, wagon material, etc.

Woolen-mill Machinery.—S. Ensey, Anchor Woolen Mills, Fort Worth, Texas, will want some machinery soon.

The Southern Dynamite & Powder Co., Tallapoosa, Ga., wants to correspond with manufacturers of the ingredients used in making dynamite.

C. Linsley, of Searcy, Ark., will want labels and rubber stamps.

J. H. Walls, Rockville, W. Va., wants to correspond with wholesale dealers in spokes, staves and handles.

The Southern Fire-Proof Building Co., of Richmond, Va., wants catalogues and price-lists from manufacturers. Reuben Shirreffs, president.

The Lowell Machine Shop, of Lowell, Mass., builders of cotton machinery, has issued a new illustrated catalogue of its slathers for cotton mills. The company has made large sales of its slathers within the past few years, and this fact seems to show that the machine is well designed and capable of doing as good work as any similar machine in the market. The Lowell slathers are made for sizing either colored or white yarns and either cotton or worsted, and they possess many valuable features, quite a number of which are special to the class of work to be done. The Lowell Machine Shop's slathers are of two kinds: First, the cylinder, used exclusively on cotton yarns, and the "hot air," sometimes preferred for cotton and used altogether on worsted yarns. The company's catalogue describes its slathers in their entirety and the illustrations give a clear idea of their construction.

TRADE NOTES.

The Philadelphia (Pa.) office of Jenkins Bros., of New York, manufacturers of packing and valves, has been removed from No. 21 North Fifth street to No. 117 North Fourth street.

A PERFECT and modern hose wagon such as Gleason & Bailey, of Seneca Falls, N. Y., build, has recently been delivered at Savannah, Ga., and now the city council orders two more.

The Mecklenburg Iron Works, of Charlotte, N. C., have been awarded contract to build a complete ten-stamp gold mill and a chlorinator plant of five tons daily capacity for the Creighton Mining & Milling Co., of Cherokee county, Ga.

The Lane Manufacturing Co., of Montpelier, Vt., employing 125 men and making work-worming machinery of all kinds, has continued its business undisturbed under the recent financial unrest. This company's machinery is very well known and the demand for it has been general, thus ensuring the operation of the plant on full time.

A FOREIGN letter to the American KBB Goods Review says: "Blackburn & Sons, who make (under royalty) the celebrated automatic seamless knitting machines known as the 'Scott & Williams,' report a steady expansion of their business in this line. The Messrs. Blackburn occupy the entire field, comprising the world, in fact, excepting only the United States and Canada, which are supplied from the home establishment, which I understand is at Philadelphia. Leading English knitters regard the machine as *ne plus ultra*, and say that it is certain to supersede all others for the production of seamless cotton hosiery."

MESSRS. BROOKS & DOXEY, of Manchester, England, are the manufacturers of a revolving flat carding engine for cotton mills which they claim possesses a number of very important advantages, including regular carding of the cotton, increased production, less waste and some mechanical improvements which are fully described and illustrated in a circular which the makers have issued. A large amount of attention has been bestowed upon carding engines during the last few years, and one improvement after another has been introduced, until in the present machine, which Messrs. Brooks & DoxeY have perfected, they consider they have one that will be universally adopted. This carding engine has passed the experimental stage, and hundreds of them are now at work and in process of construction, some firms having given two and even three "repeat" orders. Mr. George Ingham, of 1606 Tioga street, Philadelphia, Pa., is sole agent for Brooks & DoxeY for the United States and Canada, and he can supply the pamphlet describing their carding machine, and will also give information of various other cotton machinery which the firm manufactures.

TRADE LITERATURE.

THE MANUFACTURERS' RECORD acknowledges the receipt of a handsome and convenient pocket memorandum book from the Metallic Drawing Roll Co., of Indian Orchard, Mass. Besides a memorandum division, compartments are provided for cards, bills, etc. It is very handy for a business man's vest pocket.

THE Interior Conduit & Insulation Co., of New York city, has issued its new 1894 catalogue of the Lundell dynamos and motors, slow speed, direct. The catalogue is fully illustrated and a complete description of the Lundell machines is given. Parties desiring a catalogue can address the company at 44 Broad street.

A CALENDAR for 1894 has been issued by the Radford Pipe & Foundry Co., of Radford, Va., manufacturers of cast-iron gas and water pipe. The new calendar is intended for the wall and is printed in dark colors, presenting a water tower and gas works on either side of the calendar pad. The company is mailing one to each of its friends.

MESSRS. T. B. WOOD'S SONS, of Chambersburg, Pa., manufacturers of power-transmitting machinery, etc., have issued a handsome lithograph calendar for 1894. The calendar proper is secured to the lower part of a card, and the upper part presents a fine steel engraving showing the Vigilant, the winner in the international yacht race, and the America, the original owner of the celebrated cup.

CATALOGUE "A" of the Fulton Steam Boiler Works, Richmond, Ind., Jno. T. Caulfield, proprietor, has been issued for 1894. It contains information, sizes and remarks on three kinds of externally-fired steam boilers—tubular, six-inch tube and two-flue—as made by this concern. Complete descriptions, illustrated, are given, and Mr. Caulfield solicits inquiries from all interested parties.

MR. L. S. STARRKETT, of Athol, Mass., has issued for 1894 a new catalogue and price-list of his make of fine mechanical tools. Every tool is illustrated and described and prices are quoted

on each. These tools are warranted accurate and satisfactory. Special attention is invited to a number of new tools, including thin steel squares, screw pitch-gages, cut-nippers, metric rules, firm-joint calipers and others. Send for a catalogue.

THE Cleveland Twist Drill Co., of Cleveland, Ohio, manufacturers of twist drills, is presenting to its friends and customers a combined calendar and memorandum book for 1894. This calendar is quite novel, the design being the sole property of the company. It is a card to which is attached a memorandum book, on the open leaves of which are printed the days and dates. Small brass clips serve to hold the book open. This calendar is being widely distributed.

A NEAT desk calendar for 1894 has been issued by the Weller Manufacturing Co., of Chicago, Ill., founders, machinists and manufacturers of elevating and conveying machinery, and mill and elevator supplies. It is a pad calendar, having a leaf for each day in the year, on which are shown illustrations of some product of the Weller Company. The pad leaves can also be used for short memoranda, and a pen and pencil rack is attached. Altogether it is a very creditable article for presentation to the trade and friends.

FROM the Webster & Perks Tool Co., Springfield, Ohio, comes a calendar that is at once artistic and practical. The artistic feature is a beautiful steel engraving of the cruiser New York under steam at sea. The practical element in the card is an engraving of a four-spindle bolt-threading machine as built by the Webster & Perks Co. Among the other specialties of this company to which attention is invited by the calendar are bar and knife-making machinery, aluminum-reducing wheels for engine indicators, milling, gear and rock-cutting, internal and external grinding, shafting, hangers, pulleys, etc.

MESSRS. J. W. PENFIELD & SON, of Willoughby, Ohio, have issued a pamphlet describing their new Penfield four-mold dry-press brick machine, on which patents are now pending. Several illustrations of the new machine are presented, and the description accompanying them is very complete, giving a good idea of its construction and operation. Prices can be obtained on application, and clay tests will be conducted for prospective purchasers. Penfield & Son are also manufacturers of sewer-pipe presses and brick and clay-making machinery of all kinds, and are pleased to correspond with interested parties.

THE Buffalo Steam Pump Co., of North Tonawanda, N. Y., has issued its new illustrated catalogue for 1894. The company makes such goods as steam-pumping machinery and single cylinder independent air-pumps and jet condensers and its pumps have been on the market for a number of years and in service long enough to insure them a prominent place among the leading pumps. These pumps are built of the packed-piston pattern, except where the nature of the work to be done seems to require a pump with solid plungers. On the second page of this catalogue is a statement to the trade of much interest, and the remainder of it is a complete price-list of finished machinery, parts, etc.

THE Monitor Steam Generator Manufacturing Co., of Landisville, Pa., has issued a pocket catalogue and price-list of its Monitor instantaneous steam generator and positive hot-water circulators, also its high-pressure boilers for power purposes. In presenting this catalogue the company has endeavored to give to steam and hot-water fitters, besides a thorough description of its own boilers, such information as has been found useful in estimating the amount of surface, size of boilers and pipes, valves and the manner of piping that will give the best satisfaction. Estimates for heating outfits will be furnished by the Monitor Company upon request. The catalogue would be of considerable value to steam and hot-water fitters, and a copy of it can be obtained on application.

A NEW illustrated catalogue has been issued of the Exeter safety sectional boilers for power and heating, and the Exeter steam and hot-water radiators, manufactured by the Exeter Machine Works, of Exeter, N. H. This company commenced the manufacture of engines, boilers and steam-heating apparatus more than twenty-five years ago, and its product is now found in all parts of the United States and in many foreign countries. The principal claims made for this firm's steam and water apparatus for artificial warming are economy of coal, pure quality of the air, ease of distribution, safety from fire, safety from explosion and freedom from dust and air. The Exeter Machine Works will have for its aim in the future, as in the past, to use the best quality of material, the latest improved machinery, and to employ the most skilled labor, so that its goods may continue to keep their high standard which they have earned heretofore.

THE Riehle Bros. Testing Machine Co., of Philadelphia, Pa., has ready for distribution its new illustrated catalogue No. 3 in two volumes. Volume I refers to the testing machinery and

appliances manufactured by the company, and volume II refers to the various forms of wooden and iron trucks, besides all articles furnished by the "supply department." The Riehle Company's testing machines are of original design and finest construction, and are claimed to be the "standard of the world." Complete illustrated descriptions of these machines are given in catalogue No. 3; also of marble-working tools, ball-bearing screw jacks, pig-metal trucks and turntables, hay and straw-rope twistors, etc. The levers and weighing parts of the Riehle testing machines are tested and adapted to the United States standard as furnished by the government, and can be adjusted to the standard of any nation desired. This company is also designer and constructor of special machinery.

To Represent the Immigration and Real Estate Interests of the South.

"There are thousands that would go South if there was some one to start the ball" is what a New England farmer writes to the Southern States magazine, of Baltimore. From Minnesota comes a letter giving a long list of names of farmers who want to go South, and with it is expressed the hope, "may God give you success in your laudable work for the benefit of us frozen denizens of the cold Northwest." And from the same State a farmer writes: "I have got and am getting more real good points regarding the South from one copy of the Southern States than I would have been able to have got in a long, long time had I not chanced to have seen it. The South will beat California for fruit. I have lived in California and known whereof I write."

Such letters as the foregoing are coming to the Southern States from New England, from the West and from the Northwest in an ever increasing number. We confess that we have been amazed at the number of these letters and at the great interest that is being aroused in these sections among farmers and others who want to go South, and for the demand for information about the South. The cry of "Go South" promises to swell to greater volume than even the "Go West" of the past ever reached, if the railroads and the people of the South will now promptly unite in vigorous work to encourage this growing tendency and do it on the same broad scale as has characterized the work of the Western States for many years. Because of these facts the Southern States magazine will henceforth be devoted mainly to the immigration and real estate interests of the South, and at the same time presenting every phase of the South's general attractions and advantages for the home-seeker and the investor with the same energy with which the MANUFACTURERS' RECORD has for ten years labored to push forward the industrial growth and interests of the South. The Southern States magazine will fully cover this field. It will continue from month to month to publish the letters of Northern and Western farmers who have settled in the South, telling of the advantages of this section as compared with their former homes. These letters are attracting great attention in the North and West. It will set forth the attractions of the South for fruit culture, as well as for every branch of agriculture; it will publish special illustrated articles covering the attractions of the South for the pleasure and health-seeker. Especial attention will be given to the real estate interests of the whole South, and reports made of all important sales anywhere from Maryland to Texas.

The leading feature of the next issue will be a general discussion of how to develop immigration, by some fifteen or twenty of the most prominent railroad officers of the South. Sample copies can be had from the Manufacturers' Record Publishing Co., publishers of the Southern States magazine.

THE employees of the Riverside Steel Co., at Wheeling, W. Va., numbering over 1200, have decided to accept the proposed cut in wages averaging 35 per cent. The entire plant has resumed.

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THE Dora furnace, at Pulaski, Va., is reported as doing remarkably well, having turned out one day lately 186 tons, and for the week 1301 tons.

THE contract for deepening the channel of St. John's river, Fla., has been transferred to the New York Dredging Co. by the board in charge of the work.

NEW YORK AND FLORIDA SPECIAL.

Inauguration of Service for Season 1894.

The Pennsylvania Railroad Co. announces that, commencing Wednesday, January 10, the "New York and Florida Special" will be placed in service, leaving Baltimore week-days at 4.45 P. M., arriving at Jacksonville and St. Augustine early the following afternoon. The train, as in previous seasons, will consist of drawing-room cars, dining car, observation car, all vestibuled. The extra fare charged in previous years for this train has been entirely abolished, but the high standard of the service will be fully maintained.

Through Train Service to Florida and the South.

The Pennsylvania Railroad Co., ever on the alert to provide whatever its patrons desire, has established for this season an unexcelled through-train service to Florida and the South.

First and foremost comes "The New York and Florida Special," composed exclusively of Pullman vestibule, smoking, dining, observation, sleeping and drawing-room cars. No extra fare will be charged on this train over and above the usual Pullman berth charges. It will leave New York, Wednesday, January 10, and every week-day thereafter until April 19, 1894, at 12.10 P. M., Philadelphia 2.30 P. M., Baltimore 4.45 P. M. and Washington 5.55 P. M. via Richmond and the Atlantic Coast Line and Plant system, arriving at Jacksonville 5.30 P. M. and St. Augustine 7.00 P. M. the following day.

There are two additional express trains via the Atlantic Coast Line, the one leaving New York daily at 9.30 A. M., Philadelphia 12.10 P. M., Baltimore 2.24 P. M., Washington 3.46 P. M., arriving Charleston 6.50 A. M., Savannah 8.23 A. M., Jacksonville 1.35 P. M., St. Augustine 3.40 P. M. and Tampa at 10.35 P. M., with buffet sleeping-cars from New York to Charleston, Jacksonville, St. Augustine and Tampa; the other leaving New York daily at 8.30 P. M., Philadelphia 11.33 P. M., arriving Charleston 11.00 P. M., Thomasville 1.07 P. M., Jacksonville 8.40 A. M., St. Augustine 10.50 A. M. and Port Tampa 7.15 P. M., connecting at that point Mondays, Thursdays and Saturdays with Plant Steamship Line for Key West and Havana, with buffet sleeping-cars from New York to Richmond, Thomasville, Jacksonville and Port Tampa. Both of these trains make direct connection via Jacksonville, St. Augustine & Indian River Railway to St. Augustine, Palatka, Ormond and Rockledge (Indian river).

Two trains leave New York daily via Washington, Richmond & Danville and Florida Central & Peninsular Railroads, the one leaving New York at 4.30 P. M., Philadelphia 6.55 P. M., Baltimore 9.20 P. M., Washington 10.43 P. M., arriving Columbia 12.05 P. M., Savannah 4.00 P. M., Jacksonville 9.00 P. M. and Tampa 7.30 A. M., with sleeping car from New York to Jacksonville and Tampa; the other leaving New York at 12.15 night, Philadelphia 3.50 A. M. (or 7.20 A. M., changing at Washington), Baltimore 9.42 A. M. (changing at Washington), Washington 11.01 A. M., arriving Savannah 4.30 A. M., Jacksonville 9.20 A. M. and Tampa 5.00 P. M., with sleeping car from New York to Jacksonville.

First Tour to Florida via Pennsylvania Railroad.

This year's series of Pennsylvania Railroad tours to the land of sunshine and flowers will be inaugurated on January 30, when a luxurious special train, composed entirely of Pullman sleeping and dining cars, will leave New York 9.30 A. M., Philadelphia 12.10 P. M., Baltimore 2.36 P. M., and thence via the most direct route to the destination point—Jacksonville. At this latter place the tourists are left to follow their own inclination as to where they shall spend the two weeks allotted to them. The great number of side trips that are available renders a selection from which a choice may be made to suit the desires of the most exacting. The unsurpassed climate, according with the cloudless, azure-blue sky throughout the immense confines of the State, and the healthful effects to be enjoyed by a sojourn within its borders are sure to be appreciated by the strong as well as the feeble, in whatever direction they are prompted.

\$50.00 from New York, \$48.00 from Baltimore and proportionate rates from intermediate or contiguous points within a generous radius are made on the most liberal basis and include railroad fare, sleeping accommodations and meals en route in both directions while on the special train.

The remaining dates of series are February 13 and 27, and March 13 and 27.

GRAHAM COUNTY, N. C., is now ready to receive bids on her new \$12,000 courthouse; time open for bids till February 1, 1894. For plans and specifications of the same address or call on W. F. Mauney, register of deeds of Graham county, N. C. The county of Graham also wants to place the bonds for the same, bonds to run thirty years at not more than 6 per cent. interest. Call on or address the undersigned for any further information. W. F. Mauney, clerk ex-officio to the board of county commissioners, Graham county, N. C.

THE Southern States

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FISHER, BRUCE & FISHER, Rooms 744-750 Equitable Building, Baltimore City, Solicitors.

RECEIVERS' SALE OF THAT LARGE AND VALUABLE COAL MINING PROPERTY OF THE FRANKLIN CONSOLIDATED COAL COMPANY,

KNOWN AS THE FRANKLIN AND PHOENIX COAL MINES, SITUATED IN ALLEGANY AND GARRETT COUNTIES, MARYLAND.

Pursuant to an order of the Circuit Court of Baltimore City, the undersigned will sell at public auction at the REAL ESTATE EXCHANGE, No. 203 East Fayette street, Baltimore City, at 12 o'clock noon, on the 27th DAY OF JANUARY, A. D., 1894, ALL THOSE VALUABLE COAL LANDS OF THE FRANKLIN CONSOLIDATED COAL COMPANY, lying in Allegany and Garrett counties, Maryland, known as the FRANKLIN & PHOENIX MINES, and comprising 1,861½ ACRES, more or less, OF COAL LANDS AND COAL RIGHTS.

Together with all the improvements thereon, consisting of Stables, Blacksmith Shops, Wheel-houses, Offices, Dwellings for mine bosses and operatives, etc.

And together with all the personal property thereon and used in connection therewith (of which a schedule will be exhibited at the time of sale), consisting of Railway Track and Equipment, Horses, Mules, etc.

The mines are now (at the date of the first insertion of this advertisement) being operated by the receivers, and produce a product of wide reputation for steam and manufacturing purposes. TERMS OF SALE: One-third cash, one third in six months and one-third in twelve months, or all cash, at purchaser's option, the credit payments to bear interest from the day of sale, and to be secured by the note or notes of the purchaser or purchasers, endorsed to the satisfaction of the Receivers.

A deposit of \$2,500 required at time of sale. VERNON COOK, W. CABELL BRUCE, Receivers of the Franklin Consolidated Coal Company. MERRYMAN & PATTISON.

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